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Some Further Notes at the Recent Art Congress.

THE collected papers of the second Art Congress will present, when published together, a great amount of thoughtful criticism on artistic subjects, coupled, no doubt, with a certain degree of mere sentimentalism, but at all events free from the extravagance which characterised some of the utterances of last year at Liverpool. Conspicuous among those which go to answer the question, what is the practical use of these gatherings, is the paper read by, or at least written by, Mr. G. F. Watts, on "The National Position of Art." This critical reflection, by an artist of singularly high aims and living entirely for his art, on the condition and aspect of the everyday life of his generation, serves at least to remind people how far we are, as a nation, from any real delight in life such as art can afford, and how much people need to be reminded and appealed to not to lose all consideration of the possibilities of beauty and interest in everyday life. Mr. Watts's voice comes indeed to the generation among which he lives as the voice of some seriously-minded artist of the early Renaissance days, who has lost his way by unhappy chance amid a utilitarian and money-making generation. He speaks to a public who mostly know nothing of the kind of interest in life which he sets before them; he is the voice of one crying in the wilderness; but such voices, though never popular, are not always without their effect. The two most striking points in Mr. Watts's paper are his remarks on the machinery question—an old subject, but which he puts in a more striking light than usual; and on the position taken by the artist in England at the present day. Will not some of the great employers of labour take to heart a great artist's appeal to them, to endeavour to preserve the human element in work as far as possible, not merely for the sake of the work but for the sake of the workman? "If by these meetings," says Mr. Watts, "the minds of those who are in power in the commercial world, the heads of firms, often themselves men of culture, lovers and collectors of art, can be awakened to the inestimable worth of encouraging their workmen to be artistic by all possible means in their power, they will be rendering their country as splendid and far-reaching a service as the poets or philosophers of the day." Here is certainly a noble ambition suggested for great employers of labour. "Very noble, no doubt, but not business," some will reply: "not the way to make money." Perhaps not, in the usual business sense; but on the other hand is there not something almost grotesque in the contrast between the means and the end pictured in Mr. Watts's next sentence?

> "The proportion of things is seldom kept in view. In the haste to be rich the very man, perhaps, who finds his most refreshing leisure within the walls of his private picture gallery, is in his daily work assisting to extinguish the life of this very Art, of which he believes himself to be so devout a lover; turning his workmen into machines, and pouring hideous and badly-made articles out upon the world, every one of which weighs in the scale against the chances of a national life for Art, as it does against national reputation."

The other remark we referred to, in regard to the position of the artist, will be a very novel one to some. We have been familiar in times past with the cry that artists were neglected and not treated with sufficient respect by Society; a cry that the artist can hardly raise now, when in truth the danger seems to be that he should be petted and pampered by Society much more than is good either for him or his art. Mr. Watts is not asking that he should be made more of, but that more should be asked and expected of him:—

> "In enterprise, in arms, in poetry, in worthy and high aims, the British nation can claim a dignified place among the most dignified. Can as much be said of the distinctive character of her school? Individual names will start into memory, and to these time will do justice, but I cannot think the school displays efforts worthy of the mental activity of our time. The ever-increasing sense of justice, the almost entirely modern development of sympathy, the desire to cast off hypocritical disguises at all costs, and the effort after truth in all things, is not evident in our art as a School.
>
> For the professor of art is not called upon by the State to record the widely reaching influence of the British nation; of its greatness no splendid reflex is required from his hand. True, he is asked to portray the nation's heroes, its prophets and its poets, but he is not himself asked to speak in stirring language or stand among the leaders of thought as one of them, and point towards the light of progress, to which all the earnest-minded of to-day are pressing.
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> We want more intellectual demand made upon our artists."

We look upon this as a very remarkable and weighty thought—perhaps the most so which the congress has produced. In the Renaissance period the great artists and poets were the great men of the day; a generation or two since this was to some extent the case in France, where even now there is more trace of it than there is with us. In England it certainly cannot be said that our great artists are leaders of thought and action, nor for the most part, perhaps, that they are fitted to be so. Modern English art seems not less remarkable for the wide diffusion of a certain standard of technical excellence, than for the equally wide diffusion of a kind of dead level of intellectual commonplace. The complaint against contemporary painting and sculpture, especially as illustrated at the Academy, is not so much feebleness of execution as feebleness and commonplace of intellectual meaning. The higher demand on them which Mr. Watts wishes for is the most certain means of producing the higher effort: to adopt Sir F. Leighton's words, "What the public wish for they will have." In France a more serious view is taken of the position and calling of an artist, and certainly the French paintings of the day, as collected recently in the Paris Exhibition, indicate the existence of a far keener and more serious interest in life than is reflected from the walls of our Royal Academy.

How little we do for our artists, to give them either the opportunity or the stimulus to produce the highest they can, was a point forcibly touched in Mr. Rathbone's able paper which we have before referred to, in some remarks partly with regard to the eminent painter whose words we have just been quoting. He maintains (going perhaps a little too far in this) that it is false to assert that Florence had powers and genius at her command which we are without. But that we have not made the most of the great artists we have had and have is, we fear, painfully true.

> "We have had and have such opportunities, and have thrown and are throwing them away with more than culpable negligence. We gave to Flaxman no opportunity for the display of his singularly graceful genius, and it has been lost for ever to England. We might have had in Alfred Stevens's monument of the Duke of Wellington a work of art of which the fame would have rung throughout the world, and we have thrust it away unfinished in a corner of St. Paul's Cathedral, where it is impossible to see it, having worried the unfortunate artist to death before he could complete it. Future ages, when they gather up the remains of the noble and lofty

genius of G. F. Watts, will not be able to repress their contemptuous scorn of the generation that gave him no opportunity of worthily displaying it."

This latter remark is more true than even some of those who are most interested in Art have probably realised. It is a really extraordinary thing, when we consider what is done by other nations in the past and in the present, that so great a painter as Mr. Watts should not have had any great opportunity given him by the English Government to execute monumental work on a great scale. Look at the great opportunity just now given by France to Meissonier—an artist who, in spite of his wonderful technical powers, is intellectually on a far lower level than Mr. Watts—to decorate the Panthéon: and consider that we as a nation have never encouraged or enabled our great painter to do anything more than paint isolated pictures and exhibit them in annual picture-gallery shows. The contrast is certainly a striking one, if English people could be got to look at and consider it.

We are disposed to think, apart from any natural and special interest in architecture, that the Presidential address in the Architectural Section, by Dr. Rowand Anderson, was the best of all the Presidential addresses delivered at Edinburgh. It was an admirably reasoned and logical statement of the position and function of architecture as an art. Dr. Anderson's object was to emphasise the constructional basis of architecture, and to combat the superficial view of Ruskin, blindly accepted by many persons who are carried away by his eloquence without considering what truth there is at the bottom of it, that a building is only architectural when it is ornamented. Architecture is the expression of constructive function; and in urging this view of the subject, Dr. Anderson went so far as to say that "the designing of machinery, whether for peace or war, has now reached such a high standard of excellence in function, form and expression, that these things are entitled to rank as works of art as much as a painting, a piece of sculpture, or a building," and also that machinery is the only true constructive art that has been produced since the decline of mediæval architecture.

"That may seem to many of you a strong statement; but if you turn it over in your minds it will lose that character, and you will recognise the truth of it. Do not misunderstand me by thinking that I want to raise steam-hammers and pumps, or the work they do, to the level of a painting or fine piece of sculpture. The work done by many of these machines is, I am sorry to say, of the most pernicious kind as far as art is concerned. All that I maintain is that the machine itself is a true work of constructive art, and ought to be recognised as such. Moreover, in conjunction with the best art of former days, they teach this important lesson, that man cannot, unless warped by bad education and false criticism, construct anything except in a natural, functional, and therefore artistic manner."

In illustration of this Dr. Anderson gave in another part of his paper an amusing account of the manner in which a late eminent archæological architect attempted to solve the problem of designing fitly a kind of building for which he had no precedent in Mediæval architecture:—

"Overhanging the steep cliffs of the Calton Hill is what looks like a castle, recalling some of the English and Welsh ones. As a matter of fact, it is mistaken by many who enter Edinburgh for the first time by the North British Railway, to be the world-wide-known Edinburgh Castle. I remember meeting the late Mr. Billings, the architect and author of the well-known work on the Baronial and Ecclesiastical Antiquities of Scotland. I had just before then seen a building of his erected for the North London Waterworks. It is in the form of a castle. I asked him why he made a water-work like a castle. His reply was: 'What would you have me make it like?' I replied, 'A water-work'; but said he, 'Can you tell me what a water-work is like, as I must have a type to work from?' As I could not do so, or convince him that he might originate one, I had to retire from the dispute, leaving Mr. Billings quite satisfied that a castle was a very good representative for a tower for pumping up water. The architect of the Calton Jail, under the influence of the prevailing taste of his day, must have looked at the problem he had to solve from the same standpoint as Mr. Billings. He wanted a type to work from, and he chose the Castle; but, as a castle is a place to keep people out, and a jail to keep people in, see what a deplorable result."

In regard to the latter sentence, it might perhaps be urged that as the object in each case is to prevent anyone getting over the wall, one way or the other, the architectural expression of the two might reasonably be rather similar; but the general truth of the position taken up is unquestionable. Carrying on the same argument in the concluding paragraph of a paper which will add a great deal to the value of the next volume of the *Transactions* of the Association, he said:—

"It is still too much the fashion to rely on the clever imitation of old work, without its reality and functional truth. I am told that much of the picturesque modern timber-framed houses in England have very little framing in them; it is all on the surface—a mere external show. The same may be said of the grand old fire-places of our forefathers, which require too often a real one within the show one, as the public, however much they may like to delude themselves about the fireplace, will not stand a smoky chimney. How can any good come out of such work? It may live for a while like many other fashions, and until some one writes up some other of the numerous phases of art, when we are surfeited by what we have been indulging in. The great and only hope of architecture lies in a healthy, intelligent public opinion; they must ask for and insist on getting structures soundly and sanitarily constructed, adapted to the purposes for which they are erected more than ever they had done; and although I say that every other consideration is to yield to this, in conjunction with this healthy public spirit, the proper education of architects must keep pace with it, because the public cannot do as a body the work of specialists; then men able to carry out such buildings in an artistic and truthful manner will, by reason of this determination, be called into existence. Architecture must cease to follow the transient literary and æsthetic fashions of the day,—the absurd distinction of fine art from that which is useful or mechanical, of architecture from building, and all the talk about applied art must give way to that which is produced as in nature. All these must pass away if we are ever to get into a clearer atmosphere of reality than now surrounds us, and we must put ourselves in line with the science of the day; then we may look forward to erecting buildings fitly representing the ideas and wants of the age with a constant succession of ever-varying expression and beauty, natural dignity, and not artificial picturesqueness."

The same general idea about architecture, as being in reality the expression of structure and function, formed the keynote of the interesting and piquant paper read by Mr. J. D. Sedding at the Friday morning continued meeting of the sections of sculpture and architecture; a paper which, with that which followed it by Mr. Stirling Lee, led to some rather lively though good-humoured sparring among architects and sculptors present. The point of Mr. Sedding and the architects, which we must be allowed to say we do not think the sculptors quite understood, was of course that architecture is itself a form of artistic expression, quite apart from any further expression which it may derive from the addition of sculpture: that there may be the artistic or inartistic element in *plan* even, apart from any consideration of the detail of the exterior elevations. The expression used above by Dr. Anderson, as to the art which is produced "as in nature," means that Architecture must be the expression of function just as the structure and design of animals and plants is the expression of function. It is odd that sculptors who are constantly employed in modelling figures the design of which is the expression of function, cannot see the same thing in architecture; but of course as long as they are so indifferent to architecture, and only think of the architect as "the man who makes the box," they are not likely to see it. In regard to the relation between sculpture and architecture, however, Mr. Stirling Lee made a really good point in art-criticism in his idea of regarding sculpture as in reality a higher form of masonry, and in his remark that "if our art" (the sculptor's) "is built up of the union of geometry and anatomy, and in accordance with the limitations of our material, it follows that the anatomical art which ignores geometrical form, however true it may be in itself to the human body, is not suitable for architecture, which is nothing if not a geometrical science." That is a view of the relation between architecture and sculpture which gives matter for a great deal of thought. In regard to the question of æsthetic relation of architecture to sculpture in the more usual sense, Mr. Mullins's paper at the Wednesday morning meeting offered a suggestion as to the manner in which an architectural framework may assist the sculptor in getting over some of the difficulties imposed on him by modern costume:—

"I think it is almost impossible to render interesting or attractive a portrait statue in modern dress, when placed in an open space—out of doors and with no near surroundings. But place the same statue by a building; either on a pedestal, in character with the architecture, or in a niche; and the monument will be then in place, and the straight up and down clothes will be a matter of less importance; they will challenge the eye less, and the statue will not at any rate be condemned because of them. I could mention several instances where this has been done; but I will only allude to two:—the more modern figures carved on the Podium of the Albert Memorial in Kensington Gardens, such as Goethe and Turner, are as interesting as their more sumptuously or artistically clad neighbours; and as they are by the same artist's hand, it is fair to infer that modern dress will lend itself to treatment; but the figure must have a home. The other is the statue of Lord Herbert of Lea at the War Office; an excellent statue, but the excellence of which is greatly enhanced by the position in which it is placed."

We may observe, however, that the last-named statue is not really placed as part of an architectural design; it is only the central object in a courtyard. As to the gain in interest to a building, and to an average portrait statue, when the latter is niched in the architecture, there can be no two opinions; and as another example of what the French are doing to encourage their own artists, we may allude to the account in our Letter from Paris, in another column, of the intended commission for no less than forty-six portrait statues for the Tuileries buildings. But when it is a question of an ideal work of sculpture of the highest class, we very much question whether the sculptors are taking the best ground for themselves if they wish their best work to form a portion of architectural decoration. For one thing, a figure or group of the highest class ought to be capable of being looked at all round—a point on which sculptors will often insist very strongly; and a work of this class ought to have so much intellectual interest concentrated in it as to be a central object in itself. We came with delight the other day on Mercié's noble group, "Gloria Victis," in the centre of one of the courtyards in the Hôtel de Ville at Paris; it seemed admirably placed there; we should not have liked to see it in a niche on the front of a building.

One of the most admirable of the shorter papers at the Congress was Mr. C. W. Whall's on "Suggestions for Artistic Co-operation," from the point of view of a decorative artist working with or under an architect. Mr. Whall, a true artist himself, is more loyal towards the architect than some less able artists, and urges that the decorative artist should be willing to follow fully the wishes of the architect in regard to the *ensemble* of the building, but on this understanding, that the architect should not fetter his ideas by any sketch. Let the architect's direction to the decorative artist, he says, have these three qualifications; let it be verbal, let it be ample, let it be final; but do not impose a sketch on him, unless you are prepared to do without him and carry out the sketch yourself. The sketch, once made, fetters his ideas; he cannot get it out of his mind, though he might have produced something much better if left unfettered. We must refer also to Mr. Whall's suggestion for a self-education of the taste: "How are we to know good ornament from bad?"—

"Do you wish to have a home, cultivated, refined, artistic? Then begin with one pet room. Your boudoir, ladies (and I am told that the best translation we have of 'Parthenon' is 'boudoir,' the private, inner, living-chamber of Pallas, presiding genius of all that is domestic, dignified, refined)—your snuggery, gentlemen (a less dignified word, and I cannot, unfortunately, supply you with Greek

for it); strip it of everything, to the bare walls, without cornice, or wainscot, or paper, and then start to decorate and furnish it, observing only one rule—to admit into it no ornament, and as little as possible even of fabric, which has been touched in any way by machinery. If you really care about beauty enough to think it worth time and trouble, I believe that this rule would result in a search for the beautiful, which would lead you into pleasant places where the neglected hand-industries languish unnoticed."

We have seldom seen a better practical suggestion for the cultivation of artistic taste.

There are many more papers in the series, well worth thought and notice, which we may return to at another time; they will all, we hope, have a permanent form in the published volume of Transactions. For the present we close with one suggestion: is it really desirable to split these Art-Congresses up into sectional meetings? We heard frequently from various speakers about the unity of art. "There is but one art," &c. Then why have separate sections for different "arts"? Both artists and the public would learn more by considering the subject as one great whole.

THE LESSON OF THE GLASGOW DISASTER.

IF the main facts as to the fall of the Glasgow mill are correctly given in the Glasgow papers, as we see no reason to doubt, there can be little or no question as to the cause of this terrible catastrophe. Like the Tay Bridge disaster, it has been due to an unusually violent wind-pressure against a structure not in a condition to resist the strain. At the first moment something was said as to insecurity of foundations, and it was mentioned that the force of the gale had been greater in the earlier part of the afternoon than at the time the accident happened. But both these assertions appear to have been disposed of since. Mr. Grant, of the Glasgow Observatory, writing to the *Glasgow Herald* of the 4th, gives the velocity of the wind for each quarter of an hour during the afternoon of the 1st, from which it appears that at 5.15 the velocity registered, forty-eight miles an hour, was higher than at any other part of the afternoon; and the anemometer at the Observatory only registers general rate of travel of the wind in a given time, not the pressure of sudden gusts, of which there were probably some which for the moment were at a much higher velocity than the general one indicated. It is stated, on what seems good evidence, that the foundations and the brickwork were thoroughly sound. What then was wrong? Simply that a couple of walls 185 ft. long and about 70 ft. high, without any intermediate cross wall, without the shelter of a roof or the breaking up of the vertical height by floors, were suddenly subjected to a heavy pressure of wind while the work was yet new. Had the roof been on and the floors in, the building would never have succumbed to the wind. It is stated that the main beams for the floors were in, which would form a certain degree of tie between the walls,—how much we cannot tell till an official inquiry elicits the details of construction,—but if there was a swoop of wind into the interior of this great shell of wall, it would tear the further wall away from the beams, which would be of little value as ties in such a case. Had the floors been in, though they had no bearing and no tie except on the cross beams, the gust would have been kept out of the interior of the shell, at all events, and would have had no hold on the inner surface of the further wall. The *Glasgow Herald*, in a leader of Nov. 4, asks whether this is not a case for reconsidering the building regulations of Glasgow:—

"The London regulations on these points are as clear as they well can be. They require that warehouses rising to the height of 70 ft. must possess walls with a thickness at the base of 30 in.; and also that 'every warehouse or other building used either wholly or in part for the purpose of trade or manufacture, containing more than 216,000 cubic feet, shall be divided by party walls in such a manner that the contents of each division shall not exceed the above-mentioned number of cubic feet.' If these rules are applied to the building which fell on Friday night, what is the result? In height Templeton's mill would be somewhat about 70 ft., but at the base the walls were not more than 25 in. thick, whilst they were only 18 in. on the upper floors. The cubical capacity of the mill must have been about double that mentioned in the London Act, and yet the precautions found necessary in the metropolis seem not to have been taken here. Are there any reasons why such a difference should prevail? Is the margin of safety too great in the one case or too small in the other? These are questions which seem to press for answers in the interests of the public."

As to the thickness of walls the writer of the above is mistaken. The walls of the Templeton mill appear to have been of the same thicknesses as prescribed by the Metropolitan Building Act, which, for height up to 70 ft. and "length unlimited," gives 26 in. for the lowest story of the wall. As to cubical capacity, that of the Templeton mill was a good deal more than double the 216,000 ft. of the London Act, but the restriction in this respect is made more with regard to fire risks than to constructive safety. It would be ridiculous to suppose that a building of that length and height cannot be constructed so as not to be in danger of being blown down. But the moral of the catastrophe is that a building should be constructed so as to be safe while in process of being completed as well as when completed. Once roofed and floored, we have no doubt the Templeton mill would have been perfectly safe against any wind, but it had too small a factor of safety to withstand an unexpected strain when not covered in; and by an unhappy chance a gale arose just at the critical moment to test it. Had the building been constructed in ordinarily calm weather, no question of its security would ever have arisen. What is clearly evident now, when too late, is that such a long and high wall was not safe during the time the building was standing empty and uncovered. The practical lesson is that in such cases either the floors should be filled in concurrently with the progress of the building; or, which is a much better way to look at it, that the wall should be rendered stable in itself by the good old Mediæval engineering expedient of deep buttresses at intervals. We gather that there were no such buttresses. The result also seems to indicate that our Metropolitan Building Act provisions for walls of this height and of "length unlimited" are not adequate for every possible case, and will bear revision.

The detailed evidence which will be forthcoming at any inquiry which may he held may throw some new light on the matter; but we do not expect that there is anything further to be known which would materially modify the above view as to the cause and the moral of the calamity.

NOTES.

IT would be waste of space to criticise seriously the extraordinary article which Lord Grimthorpe has been allowed to write in *Murray's Magazine* on "Church Restoration Principles." As long as the public and editors of newspapers and magazines are so ignorant and silly as to believe that the whole architectural profession are fools or worse, and that Lord Grimthorpe is the only person who understands the subject, because Lord Grimthorpe tells them so, it seems useless to argue with them. The opinions of people who can be taken in by such ridiculous bosting are not worth taking into consideration at all. We may just remark that, as usual, Lord Grimthorpe entirely begs the main question as to what he has done at St. Albans; which, as we have said over and over again, is not whether such and such rebuilding or restoration ought to have been undertaken at St. Albans, but whether he was a fit and proper person to be allowed to carry out such work at his own pleasure on a great national building. How fit he is has been conclusively shown by the monstrosity which he has erected at the end of the south transept of the cathedral, which is there for every one to see; and to the eloquence of that condemnation no protest of ours can add anything. Two things in the article are, however, too amusing to pass over. One is the remark that "nothing is more delusive than the noise that a very few people can make in newspapers that help them." Was Lord Grimthorpe thinking of his own repeated letters in praise of himself and in abuse of everybody else, which the *Times* has for many years so complacently printed? The other is the remark with which he introduces at the end of the article a laudatory Latin poem on his own work at St. Albans. He says "some persons, whose letters show their education, though unknown to me, have published their opinions, where they could," in favour of his work. "Here," he continues, "are some Latin verses sent a few months ago, with initials which will be recognised as those of one of our most distinguished Latin scholars, on these very transepts. Many persons who have seen both wish to see the lines published. I wonder how many great—or small—scholars have written poems in praise of any product of the Royal Institute of British Architects." This would be childish enough even if the verses were, as the reader is intended to think, the spontaneous tribute of one of the unknown admirers. Unfortunately, we happen to know that the signature of the verses, "J.G.L.," is that of Canon Lonsdale of Lichfield, and that he is Lord Grimthorpe's brother-in-law. And it is this specimen of the "family puff" that Lord Grimthorpe has the effrontery to offer to the public as an example of the admiration which his architecture has aroused in men of cultivated minds!

SOME tentative excavations are being made by the Greek Government at Lykosuta, in Arcadia, which already promise to yield rich results. Lykosuta was accounted to be the most primitive city of primitive Arcadia,—in the words of Pausanias it was the first city "looked on by the sun." Just outside the circuit of its walls was the ancient sanctuary of a primitive goddess, known as Desponia the Mistress. To the description of this sanctuary Pausanias (viii. 38) devotes a whole chapter. Within it he saw altars and statues to Demeter, Desponia, and the Great Mother, and he notes as remarkable that the statues of Desponia and Demeter, the thrones on which they sat, and their footstools, were all carved out of one block of stone without any manner of join. The stone was not brought from a distance, but quarried on the spot in accordance with a dream oracle. The statues were by Damophon. Desponia was represented holding a sceptre in one hand and with a cist resting on her knees. Already the excavators have happily lighted upon the precinct; they have found three colossal heads and a portion of a large marble relief, countless votive terra-cottas representing rams and snakes; a few inscriptions show that the offerings were made to Desponia. She is a goddess whose worship was closely allied to that of Demeter, Persephone, and other under-world deities, but whose personality we should be glad to be able to fix more precisely. A brief notice of the excavations will be found in the *Berliner Philologische Wochenschrift*, October 26.

THE able and enthusiastic speeches which were made at the first dinner of the Institution of Electrical Engineers were such as the occasion naturally called forth, with the merit of being on the whole superior in style and oratory to the average of after-dinner speeches at Institution dinners. But the event, the first convivial celebration of this Institution (in its newly-constituted form,—for it was formerly known as "the Society of Telegraph Engineers and Electricians"), and the prophetic tone of the speeches delivered, are too significant to be passed over. Young as the science of electrical engineering is, it

already feels that it holds a large part of the future prosperity of the human race in its hands. Perhaps the most striking remark made in the course of the evening, and the one suggesting most forethought as to the future possibilities of electricity in regard to the amelioration of the conditions of human life, is that of the Marquis of Salisbury in regard to the possible results of the distribution of electrical power:—"If it ever does happen that in the house of the artisan you can turn on power as now you can turn on gas, and there is nothing in the essence of the problem, nothing in the facts of the science, as we know them, that should prevent such a consummation from taking place—if ever that distribution of power should be so organised, you will then see men and women able to pursue in their own homes many of the industries which now require the aggregation at the factory. You may, above all, see women and children pursue these industries without that disruption of families which is one of the most unhappy results of the present requirements of industry. And if ever that result should come from the discoveries of Oersted and Faraday, you may say that they have done more than merely to add to the physical forces of mankind. They will have done much to sustain that unity, that integrity of the family upon which rest the mortal hopes of our race and the strength of the community to which we belong."

THE concluding sittings of the Railway Rates Inquiry last week were entirely occupied with the evidence of Mr. Findlay, the General Manager of the London and North-Western Railway, whose examination had not concluded when the inquiry was adjourned. Mr. Findlay was led upon dangerous ground in cross-examination by Mr. Balfour Browne, as to the effect of the legal decision in Hall's terminals case, and made some remarks which brought up Mr. Pope, Q.C., who was evidently apprehensive that his witness might compromise the company. Mr. Pope observed that the London and North-Western Company must not be held committed by any view taken by their General Manager in regard to an interpretation of the law. The great point in support of the companies' claim to make terminal charges appears to be that they perform duties and provide accommodation as "carriers"; a capacity which is distinct (according to their arguments) from that of conveying by rail. It is held that the latter service only is covered by the mileage rates, and Mr. Findlay stated that if the charges claimed were refused, there was nothing to prevent the companies from reverting to their original position,—that was, to convey the goods from place to place, leaving it for carriers to discharge the terminal duties, and make their own charges. At large towns these duties are certainly now inseparable from those of railway companies for many descriptions of traffic, whatever may be the case at smaller stations; and it would appear that a large proportion of the present rates is made up of terminal charges. A case came before the Railway Commission on Saturday last, in which it was admitted that a rate of 9s. 2d. per ton included sums of 1s. 6d. and 1s. 9d. for "terminal accommodation" and "terminal service" respectively at the forwarding station, and 1s. 6d. and 11d. for similar items at the receiving station. It may be mentioned that the mileage charge amounted to 2s. 7d. only, the difference being represented by the items just mentioned, and additional sums for sheeting and cartage. With the favourable legal precedent in Hall's case to back them up, it appears quite likely that the companies may gain their point in this respect.

THE seven representative mayors who are to figure after the life in the "Lord Mayor's Show" of to-day were elected within a period of 600 years. The beginning and the close of that interval were marked respectively by two important ordinances for regulating the construction of London houses. In 1189,—the year of Henry Fitz-Aylwyn's appointment,—it was ordered that all houses should be built of stone up to a height of 16 ft., with party-walls of stone to at least 3 ft., and that they should be roofed with slates or baked tiles. It may be worth while to remember that in old conveyances, the word *domus* was commonly employed for a stone building; and wooden tenements were designated as *ædificia*. In 1774, a period to be typified by John Wilkes, was passed the lengthy Metropolitan Building Act, the first of its kind,—14 Geo. III., c. 78. Fitz-Aylwyn's mayoralty of twenty-four years was distinguished by the beginning of St. Mary Overy's, or St. Saviour's, Church, Southwark; the completion of Peter of St. Mary Colechurch's London-bridge; the making of the "town ditch"; the demolition of Baynard's Castle, and the death (1191) of William Fitzstephen. To Fitzstephen's introduction to his "Life of St. Thomas à Becket" we owe the earliest account we possess of what London was like in the reign of Henry II. He speaks of its 126 parochial churches and thirteen conventual foundations situated within and without the walls, with their posterns and seven double-gates. He describes its numerous open spaces or "rome-lands," large gardens, and refreshing wells. The monasteries of the Austin Friars and the White Friars had not yet arisen; but among his list are to be reckoned St. Katharine's by the Tower; Rahere's Priory of St. Bartholomew; Holy Trinity by Aldgate, whose prior was alderman of Portsoken ward, which, together with Houndsditch and Aldgate, Lord Mayor Isaacs will traverse this afternoon; the Temple, St. John of Jerusalem at Clerkenwell, and the Cluniac monastery at Bermondsey. In 1285 (Sir Gregory de Rokesley, mayor) was begun the great stone conduit in West Chepe, supplied from the Tyburn; in 1397 (Sir Richard Whittington, first time mayor) Westminster Hall was repaired and enlarged by King Richard II. The period covered by Whittington's two later elections, for 1406 and 1419, was marked by the removal of the Guildhall from Aldermanbury to its present site, by a plague that killed some 35,000 inhabitants, and by an order that householders should hang out lighted lanterns after dusk between All Hallowtide and Candlemas day. In 1546 Henry VIII. founded St. Bartholomew's Hospital, and in 1547 (Sir John Gresham) was begun old Somerset House; in 1611 (Sir William Craven) Thomas Sutton bought the Charter House of the Earl of Suffolk for his new hospital; and in 1775 (Wilkes) Somerset House was begun to be rebuilt, as we now see it, after the designs of Sir William Chambers. These several mayors, together with Sir Edmund Shaa, will be personified in the "show."

ONE result of the paper that was read by Mr. Belcher at the Institute of Architects last session, on "Musical Requirements in Church Planning," is that the College of Organists have suggested the advisability of a joint committee of their body and the Institute to consider the subject more fully; an idea which will be carried out shortly. Mr. Belcher, Mr. Sedding, Mr. Stannus, and Mr. Statham will represent the Institute of Architects on the committee, and the College of Organists will be represented by Dr. Martin, of St. Paul's, Mr. Parratt, organist of the Chapel Royal Windsor, Mr. Higg, of the Royal College of Music, and Mr. Turpin, the Honorary Secretary of the College of Organists.

WE commend to the attention of students of architectural design the paper read by Mr. Baggallay at the Architectural Association, and printed in another column, on the treatment of the angles of buildings. The subject is a rather new and very important one, and Mr. Baggallay's treatment of it is full of valuable suggestions for young designers.

WE have received from Messrs. Hancocks & Co., jewellers, a description and a roughly-executed illustration of a casket made to contain the address of congratulation from the Corporation of the City of London, presented to the Duke and Duchess of Fife. Of the execution of the work we can of course say nothing from the rough illustration sent; if jewellers want us to say anything of their workmanship they should send photographs. Of the design we can only say that it is the same kind of ill-designed and pretentious commonplace which is to be seen in almost all work of this kind executed in England for official presentations. It is a kind of temple with pavilions at the angles, mounted on steps, and with the City Griffin on a pedestal at each end. The lines of the steps and platforms are most clumsily designed, with not the slightest relationship between the parts, curves stuck on to squares and squares on to curves in a manner that would horrify any one with a feeling for architectural setting-out; and this kind of design is of course architecture in miniature. The decorative details of the upper part are of the most commonplace description; and even if they were better, a casket to hold an address should be a casket, and not a toy temple. No name of any artist is given as the designer, only it is stated that the griffin is copied from Mr. Birch's too notorious griffin on the site of Temple Bar. Otherwise this appears to be, like most things of the kind in London, a mere shop production. If the firm of jewellers who have produced it had gone to a high-class artist to make them a design they might have produced something which it would have been a pleasure to see and to record, and would have had our good word, which they cannot have for this kind of work.

SOME very great nonsense was talked by sundry artists at the closing meeting of the Art Congress at Edinburgh, in the discussion upon a very moderate and well-written paper by Mr. Spielman upon "Artists and Critics." Several artists present amused themselves (and some of their audience) by denouncing, in no very courteous terms, all art critics *en masse*, evidently regarding it as little less than impertinence for any one to criticise their works at all. Apart from the main question, we may suggest to artists that as long as their own sympathies in regard to art are so narrow, each class of artists might at all events learn something from the critics about other classes of art than their own. How necessary such teaching is for some of them we may illustrate by two or three examples from our own experience. Speaking to a painter whose works have for many years been hung at the Royal Academy, about a fine piece of sculpture in the exhibition of the year, he replied, "Oh, I never go into the Sculpture Room." Talking to a well-known and talented sculptor about Corot's landscapes, he replied, "Who is Corot?" One of the first landscape painters of the day inveighed violently to us one day against the ignorance of the art-criticisms in the *Times*, and in the same conversation told us that David Cox was one of the greatest humbugs that ever pretended to be a landscape-painter. If he had found any remark so stupid as that in the *Times* art-critiques, he would indeed have been justified in his diatribe. But let us ask two questions, more directly bearing on the *raison d'être* of art-critics. For whom do the artists produce their work? Not for each other, surely, but for the public: and are they alone of all mankind to maintain the position that the public, or the art critics as representing the cultivated public, are not even to have the right to say whether they like the work offered to them or not? Artists are to produce what they please, and the public are to be thankful for it, and have no opinion of their own! A tolerably modest position, certainly. And our second question is: suppose the critics take the artists at their word, and that next spring every daily paper, every weekly paper, and every high-class magazine, agrees to drop all notice of the Academy and the Grosvenor and the New Gallery, and the two water-colour exhibitions, and all the other displays of art: who would be the first to complain?

LETTER FROM PARIS.*

THE official decree closing the Paris Exhibition on the 6th of this month has been so far modified that holders of tickets can still be admitted between midday and 4 p.m. on to the Champ de Mars, and see all that is to be seen without interference with the work of removal. This arrangement appears to be considered generally satisfactory, as it leaves the exhibitors at full liberty to commence the removal of their goods, while it leaves a chance for the rural population, who are now set free from their labours of harvest-time, to still see something of the great show before it is entirely dispersed.

As soon as the Champ de Mars and the Esplanade des Invalides have been restored to their normal condition, the works will be commenced for the railway which is to join that which, at present terminating at the Champ de Mars, connects with St. Lazare by way of Moulineaux, Sèvres, St. Cloud, Asnières and Courbevoie. The section of the line remaining to be completed is about a kilomètre. It will be formed in a deep cutting parallel with the Quai d'Orsay and crossed by three large bridges. The cost of the section comprised between the Champ de Mars and the Invalides is estimated at about 2,720,000 francs, and 4,500,000 for the construction of the terminus, which will have a monumental façade along the Rue de Constantine. This piece of line, penetrating into the heart of Paris, may be considered as a first instalment of the long-promised metropolitan railway for Paris, which M. Yves Guyot, the present Minister of Travaux Publics, is doing his best to secure the execution of.

The opening of a number of minor exhibitions when the great Exhibition had closed was to be expected; among the first of these, which was already open last week, are those of M. Bida and M. J. P. Laurens, who have opened exhibitions in the Durand Ruel Galleries; the first, a collection of illustrations of the works of Molière and Shakespeare, the second, a collection of forty-two splendid drawings intended for the illustration of M. Thierry's "Recits Mérovingiens." Another special exhibition is that of the works of M. Albert Aublet at the Georges Petit Gallery; a collection including portraits, landscapes, sea-pieces, *genre*, &c.; about three hundred pictures altogether, many of which had better have remained in his studio, being little more than sketch studies for pictures. The collection includes, however, some really fine finished pictures, both landscape and figure subjects.

The École des Beaux-Arts has opened its doors, at the regulation period, for the exhibition of the "Envois de Rome," with which we are less satisfied than last year, except perhaps in regard to the architectural designs. In regard to the painting, the exhibition would give very poor promise for the future, if we did not know that the really clever men, the course of academic education once finished, are ready to throw off all its trammels as soon as they are clear of the Villa Medici, and to burn all the idols they have been officially compelled to worship. The architectural *envois*, however, are many of them of real interest, and at all events bear testimony to the thoroughness of erudition with which this branch of the École des Beaux-Arts is conducted. Among the drawings exhibited, M. Chedanne, who has been one year in Rome, exhibits, along with some admirable drawings of fragments of entablatures, an interior of a Roman house restored, showing both archæological learning and refined taste. M. Defrasse exhibits some remarkable drawings, especially the reproduction of a fragment of a Pompeian mosaic, from the Naples Museum. M. André sends a restoration of the temple of Niké Apteros, and M. Espouy a restoration of the Basilica of Constantine at Rome, which are meritorious, but are surpassed by M. Redon's very fine restoration of the Temple of Baalbek. We have on previous occasions mentioned the ability displayed in the work of this young architect, and the present exhibit fully confirms the impressions we had already formed as to his brilliant promise.

There are on view at the same moment, at the Hôtel de Ville, the results of four competitions; three in painting and one in sculpture. The latter, for a memorial statue to Condorcet, includes no fewer than 86 models. Many of these represent an elegant and fashionable Condorcet; some show him as a sentimental dreamer, some as a public orator in a magnificently tragic attitude; but there is not a single work of real power or originality, or in fact worth premiating.

Of the painting competitions, one is for the decoration of the Salle des Mariages for the Mairie of Nogent-sur-Marne. Three painters, MM. Debon, Karbowsky, and François Lafon, have been selected to compete in the final competition. Their works are essentially modern in feeling, representations of domestic rural life. It is probable M. Debon's design will be the work ultimately chosen. The two others are competitions for the decoration of the Salons of the Hôtel de Ville, the "Galerie Loban" and the salon called "Du Siège de Paris." Of the designs for the former the less said the better; they show an entire deficiency of decorative quality, and it is probable the competition will be annulled as having produced no satisfactory result. It is very different with the second-named competition, the results of which have been so remarkable that the jury have selected five instead of three of the competitors to take part in the final competition. These five, in alphabetical order, are M. Arus, a military painter who seems to have inherited some of the brilliant qualities of De Neuville; M. Paul Baudouin, a disciple of Puvis de Chavannes; M. Adolphe Binet, a much appreciated "moderniste;" M. Delance; and M. Henri Dupray, the latter in collaboration with M. René Gilbert. These different painters have reproduced with talent almost equal though very different in quality, some of the principal scenes of the melancholy epoch to which the *Salon* in question is dedicated; the combats under the walls of Paris, the bombardment, the ambulances, and the crowd of women and children sheltering within a gateway from the storm of bullets. In the second competition, the real contest will probably lie between M. Arus and MM. Dupray and Gilbert.

We referred the other day to the scheme of M. Larroumet for the sculptural decoration of the Panthéon. We may now refer to the state of the equally-important scheme for the pictorial decoration of the same building. After many years (sixteen years we believe) M. Meissonier has at last submitted his sketches to the Commission des Beaux-Arts. This portion of the decoration is divided by columns into four compartments, but the composition forms a united whole. In the centre is the chariot of France drawn by lions and surrounded by protecting genii. In front horsemen carrying standards pass in front of an enthusiastic crowd of spectators. Behind the car follow men bearing on their shoulders statues symbolising "Les Arts," "Les Sciences," "Le Travail," and "L'Industrie." Above is a large frieze, each of the four sections of which illustrates a different period of French national history. The first relates to the period from Clovis to Charlemagne; the second that from St. Louis to Charles VI.; the third from Jeanne d'Arc to Francis I.; the fourth from Louis XIV. to Napoléon I. This will certainly be one of the most curious portions of the Panthéon decoration.

The opening of the Lycée Buffon, designed by Vaudremer, will be shortly followed by that of the new Lycée Voltaire. This work, commenced in 1885, and occupying a large site adjoining the Avenue de la République, will have cost, when completed, about five million francs. It is to accommodate 1,200 pupils, of whom 500 will be day-boarders. The principal entrance is in the Avenue de la République, preceded by a large court planted with trees. The building is very well planned for its purpose, and does credit to M. Eugène Train, architect also of various other important scholastic buildings, notably the Collège Chaptal.

M. Bouvard, now known to fame everywhere as the designer of the central pavilion of the Exhibition, is occupied at present with the construction, on the Place du Château d'Eau, of a Bourse du Travail, of which the shell is already completed. It occupies the site of the old panorama of the Bastille. It was commenced in April last, and is to be inaugurated on the 14th of July next.

The Municipal Administration is establishing in each of the cemeteries of Paris a mortuary for the reception of the bodies of those who have died from any kind of contagious disease. The first is to be built in Père-la-Chaise. Each of these will be divided into two sections; the one containing the apartment for the deposition of the coffin, that for disinfection, and a room into which the public will be admitted. The other portion will include a room for the "exposition des morts," and five separate chambers for the laying-out of bodies waiting for interment.

The sculptural decoration of the Tuileries, which has been interrupted for some years, is to be proceeded with. Statues of a similar type to those on the Pavillon de Rohan, and which symbolise the military glories of France, are to be placed in the niches disposed between this pavilion and the Rue des Tuileries. The new statues will be forty-six in number, and among the list of celebrities represented will be Carnot, Bouchardon, Jeanne d'Arc, Mdme. de Sevigné, Mdme. de Staël, as well as the principal maréchals of the First Empire.

Another important piece of artistic work is to be taken in hand in connexion with the Collège de France, the Cour d'Honneur of which is to be decorated with fresco paintings, symbolising Art, Literature, and Science, with other allegorical decorative *motifs* referring to the various branches of study in the establishment. This scheme of decoration is to be completed by busts of the leading professors of the ancient Collège Royal, now the Collège de France.

At the École des Beaux-Arts the competition jury, under the presidency of M. Ginain, has given judgment on the work of the First Class of Architectural Students. The subject was "Un Palais à la Campagne," and among forty-two designs, a First Medal has been awarded to M. Schutzmann, pupil of M. Gerhardt; and Second Medals to MM. Chaussemiche and Curvale, pupils of M. André, to M. Chifflot, pupil of MM. Daumet & Pascal, M. Bossis, pupil of M. Pascal, and M. Louis Masson, pupil of M. Ginain. The jury has also decided on the sketch competition in architecture, for which the subject was, stables and coachhouses for a château. Second Medals were given to M. Deperthes, pupil of MM. Ginain and Deperthes; and to M. Closson, pupil of M. Ginain.

In speaking of the École des Beaux-Arts we may add that, contrary to expectation, the École is still unable to make use of the Hôtel Chimay, purchased by the State in order to permit of the enlargement of the premises of the École, the ateliers of which are defective in every respect and quite insufficient for their requirements.

The year 1889 has been a very fatal one to French art: we had already lost Cabanel, and now Dupré has followed. This distinguished landscape painter was born at Nantes on April 5, 1811, and exhibited his first works at the Salon in 1831, at the age of 20; an "Intérieur de Forêt," with two other paintings. From this time up to the last moments of his long life, Jules Dupré worked without relaxation. Among the best known of his numerous works may be mentioned "Vue des Environs d'Abbeville"; "Dans les Landes"; "l'Intérieur d'une Ferme," &c. Many of his landscapes are taken from the country on the banks of the Oise, where he lived. Two remarkable pictures painted for the decoration of the Hôtel of Prince Demidoff, "Le Matin" and "Le Soir," were purchased by the State in 1877, and placed in the Luxembourg Museum.

Dupré was the precursor of Rousseau and Troyon. He was the first to break from the commonplace conventionality into which French landscape art at that period had fallen; and has been the last survivor of an illustrious group of artists among whom were numbered Corot, Millet, Daubigny, and Diaz. He received the decoration of the Legion of Honour in 1849, and that of "officier" twenty-one years later. Higher honours which have fallen to others were not his, nor did his artistic reputation need any such aids to fame.

Among other recent deaths in the artistic world must be mentioned that of Robecchi, a talented decorative artist; Lucien Melingue, historical painter, and son of the eminent dramatic author of that name; and Mdlle. Berthe Daudet, a clever painter, some of whose portraits have attracted much notice, especially that of M. Taskin, exhibited in the Salon of 1884.

Exhibition in Berlin.—The success of the Paris Exhibition appears to have touched the Germans, and the holding of a similar exhibition next year in Berlin is now warmly advocated in the press. It is proposed to invite Austria-Hungary to share in the undertaking. Recently the proposal was before the Berlin Association of Artisans, where it was also warmly embraced. A committee has been appointed to furnish plans and estimates for the exhibition.

* Unavoidably postponed from last week.

THE ROYAL INSTITUTE OF BRITISH ARCHITECTS:

THE PRESIDENT'S ADDRESS.

THE opening meeting of this Institute for Session 1889-90 took place on Monday evening last, at 9, Conduit-street, Mr. Alfred Waterhouse, R.A. (president), in the chair.

Mr. W. H. White (secretary) announced the decease of the following members, viz., Mr. Samuel Musgrave, Fellow, of Hull; Mr. Gerard Ford, Hon. Associate, of Brighton; and M. Firmin Epellet, of Arras, hon. corr. member.

The Secretary also intimated that the Council had granted a certificate of competency to act as District Surveyor in London under the terms of the Metropolitan Building Act, to Mr. Geo. L. Crickmay (Associate), of 17, Parliament-street, Westminster. Certificates of competency to act as building surveyors under local authorities had also been granted to Mr. Robert Williams (Associate), and to Mr. Hugh Tasker.

The Church of St. Mary-le-Strand.

Mr. J. Macvicar Anderson remarked that a good deal had been said at the Institute, as well as elsewhere, in regard to the Church of St. Mary-le-Strand, and he therefore thought it might interest many to know that its restoration was now complete (applause). The removal of the hoarding had taken place that day, and he thought he might say with some amount of satisfaction that from his own knowledge the church had left his hands in some respects in an actually sounder state than that in which it left the hands of its original architect (renewed applause).

Mr. Ewan Christian added that he told a public meeting convened for considering the advisability of restoring the church*, that the fabric was as strong and substantial as any building in London, and that it would be a monstrous shame to attempt to remove it. He was also sure that Mr. Anderson would make a good job of it if he took it in hand (applause).

Mr. Ralph Nevill suggested that the church should be open for inspection for a few days.

Mr. Macvicar Anderson said that the verger lived close by, and there was no difficulty in gaining admittance at any time.

Mr. James Brooks said he hoped that arrangements could be made for opening the church for a week.

The President's Address.

The President, who on rising was received with great applause, then delivered the opening address of the session, as follows:—

Gentlemen and colleagues,—When I had the privilege of addressing you from this chair at the opening of last session we were on the eve of an important event in our history. Having lived for upwards of half a century under our first charter of incorporation, we were about to start life afresh under a second. But last November the By-laws made under its provisions had not been finally approved, as the character of the Examinations through which Associates would for the future have to pass had not been then defined to the complete satisfaction of the Privy Council, nor had the terms and conditions of competition for certain prizes been inserted therein. This having subsequently been done and submitted to a special general meeting of the Institute, the Council were duly authorised to sign and seal the By-laws, which met with their lordships' approval on the 7th of last February.

Of these By-laws one of the most important authorises the alliance, under certain conditions, of non-metropolitan architectural societies with the Royal Institute. In consequence of this provision, and after the necessary negotiations, nine societies entered into alliance with the Institute, viz., the Sheffield Society of Architects and Surveyors, the Leicester and Leicestershire Society of Architects, the Manchester Society of Architects, the Glasgow Institute of Architects, the Northern Architectural Association (Newcastle), the Bristol Society of Architects, the Nottingham Architectural Society, the Royal Institute of the Architects of Ireland, and the Liverpool Architectural Society (applause).

The Presidents of seven of these nine bodies were in June elected members of the Council, and all the nine allied societies are now assisting in the conduct of local examinations under the new system, as Liverpool last year, and Glasgow, Leeds, and Manchester in previous years, did most efficiently under the old. The alliance of these societies and their cordial co-operation for the advancement of our art are, I think, among the most pleasing and satisfactory results of the working of the new Charter, and a happy augury for the future. I trust the time may be not far distant when other non-metropolitan societies may be enabled to ally themselves with the Institute, and that in this way our scheme for progressive examinations may be carried out more generally than is at present possible, and, in fact, leave no part of the United Kingdom to feel itself neglected in this way (applause). I should add that the Australian societies are desirous also of entering into alliance with the central chartered body at home, and that the question of holding examinations in Sydney and Melbourne—which is a more difficult one than it at first appears—is engaging the attention of those who have had most to do with the establishment of our progressive examinations.

The members of the present Council are the first who have been elected by voting-papers sent and returned by post; but notwithstanding the facilities thus offered, only about 500 members voted out of 1,200 who had the power to vote. Since then there has been a large accession of new Fellows and Associates, and I sincerely hope that on the next occasion a greater proportion will take sufficient interest in the affairs of the Institute to record their wishes as to who shall represent them on its Council.

Perhaps I may be allowed to state, without wearying you with statistics, that during the session which has just terminated, 112 gentlemen were admitted to the Examination in Architecture. Of these, eighty-two passed, and eighty-one Associates were elected during the session (applause). Instead, therefore, of the obligatory Examination being a deterrent, it seems to be a positive attraction to the young architect, and no sign could possibly be healthier, no evidence more encouraging, to those who have our practical examination system at heart (applause). Besides which, sixty-two Fellows were elected, of whom twenty-six had been Associates, so that, with this satisfactory increase, the number of subscribing members reached a net total last September of 1,350, as against 1,200 in 1887, and 1,190 in 1885, at the same period of the year. With such additions to the classes of Fellows and Associates, with the certain prospect of still further additions, and with a Council increased from twenty-one to thirty-four members, comes the pressing consideration of how we can best gain the needed expansion of our premises here, and on this your Council may shortly be expected to submit an important proposal. We want greater space for our always-increasing library, and better and more private accommodation for the conduct of our business, which has also largely increased.

The Library, which is open every working-day and evening in the year, now consists of upwards of 8,000 volumes, and is, I believe, the only special architectural library in the United Kingdom. Its formation is associated with the honoured names of Donaldson and Papworth; of Nelson, Tite, the Wyatts, Hardwick, Mocatta, Fergusson, and others; of some of the most distinguished European architects and archæologists in Europe; and last, but not least, with that of Mr. David Brandon, who has so generously defrayed the entire cost of a new and complete catalogue, arranged under the three separate heads of subjects, authors, and countries, than which no gift could have been more opportune (applause).

The Royal Gold Medal for the Promotion of Architecture, after having been given previously in three successive years to three practising architects,—two foreigners and one Englishman,—was awarded last June, with her Majesty's gracious sanction, to a learned English archæologist. The presentation of this medal to Sir Charles Newton was a tribute not only to his personal attainments, which are great, but also to the merits of that great Institution with which Sir Charles has been so long connected, and which is so rich in treasures of classic art. With the conspicuous exception of the Royal Medal, British architects have been content to do their work without much intervention, or even recognition, from the State. If their creations are noticed in either House of Parliament it is generally with very equivocal praise, if not with open abuse; though that need not very much disturb us (laughter). Our legislators have perhaps little leisure for the contemplation of the beautiful in art, and seldom rouse themselves to any studious appreciation of architecture, unless it be to such adverse criticism as politicians in opposition find convenient for the Parliamentary harrying of a First Commissioner of Works and Public Buildings!

An eminent German, a member of the German Parliament, Dr. Reichensperger, who was one of the judges in the great competition for Lille Cathedral, and who enjoys a cosmopolitan reputation, has explained the attitude of the State towards the British architect in, to us, interesting terms. He says, to quote his words:—

"The well-known aversion of the English to bureaucratic overgovernmentation exhibits itself even in the domain of art, especially in that of architecture. There is on the other side of the Channel no hierarchically classified and betitled band of architectural officials; neither do we meet in England with establishments founded and supported by the State for the education of architectural students, nor with governmental examinations, nor with official diplomas thereupon granted. Nevertheless, the English continue to execute architectural works of all kinds, not only in no respect inferior to our own, but, in my estimation, actually superior from an æsthetic point of view."

This praise from a well-known German, coming as it does with almost similar eulogistic comment from French architects of distinction, ought to be some consolation to us, if we are tempted to think that from authorities at home abuse comes more naturally to us than honours (hear, hear). There has, however, been a very gratifying instance to the contrary during the past year, in the knighthood conferred on our colleague and former vice-president, Sir Arthur Blomfield (cheers), at which we rejoice, not only on account of his personal qualities, and because of our knowledge of the beauty of the buildings he has executed, but because it is a recognition from the Throne itself of the excellence of English architecture, as illustrated in Sir Arthur's works.

Among the subjects which engaged our attention during the past Session, was that of a new, or rather amended, form of Articles of Pupilage. Though carefully prepared at the instance of the Council by the Practice Standing Committee, it was rejected at a special general meeting of the Institute, in consequence of the omission,—due to a desire expressed by a majority of the Council,—of the words "and surveyor" from the title of the third party to the contract, namely, the architect. The difference of opinion raised by the discussion was not open to further argument; but I think the desirability of publishing such a form of Articles of Pupilage as an Institute paper is so great, and of such important consequence to our profession, that I venture to suggest a compromise, which may, I feel sure, be accepted by both those who style themselves only "architects" and those who style themselves "architects and surveyors." I would propose, in the form which is to be issued, to omit both one and the other,—to leave simply a blank, in which you, gentlemen and colleagues, may insert the word "architect," or the words "architect and surveyor," at your pleasure, and as you may deem fit (applause). The new form, the substance of which was approved by you, makes provision for such absence from the office as may, in the opinion of the principal, be reasonably allowed to the pupil for qualifying himself by attendance at lectures and classes for the Institute Examinations; and, further, it contains a clause arranging for the refunding, before a given date, of a portion of the premium in case of the inability of the principal to perform his side of the engagement. We must all be well satisfied that such reasonable stipulations have been suggested for incorporation in a form of Articles of Pupilage to be issued with our authority. There is no doubt but that they have been already acted upon by many architects; and the public should, without further delay, be enabled to profit by a very excellent form of Articles, which, however, cannot be published as an Institute paper without your sanction.

On another occasion, during a very important discussion which took place last April in this room on the scope of the Institute Examinations, some remarks were made by the Professor of Architecture at the Royal Academy which appeared to me to have great weight, though they were not supported. The Professor would make no inquiries in these Examinations as to the historical or archæological knowledge of the student under examination, but simply test his fitness as a building constructor, entirely irrespective of archæological peculiarities or, in

* See *Builder* for Dec. 8, 1888, page 407.

other words, styles of architecture (hear, hear). Now, though I disagreed with him to this extent, that I thought it would be most desirable for every architect in this end of the nineteenth century to know a little about the styles which have brought architecture to its present position, it is most important that our Examinations should never have anything about them likely to fetter the student in any way; and I think that, under the present system, the utmost freedom is allowed our students in all that concerns the inventive side of their art. It is better, in my opinion, to encourage independent judgment and invention in devising means to a prescribed end than any slavish conformity to ancient precedents. But, at the same time, we should be very unwise to refuse to take advantage of the accumulated experiences of the past—(hear, hear)—or to completely sever that tie of tradition which makes the acquisition of architectural knowledge partly a study of history, and connects it from age to age with the life of a nation (applause). Again, a discussion took place here last January, on the award of the Soane Medallion and other prizes, when it was advocated that we might premiate a design, which did not fulfil the prescribed conditions, and was avowedly unfit to be applied to the purpose for which it was intended, if only it displayed some excellence of design, or rather some originality in external appearance, obtained, perhaps, at a sacrifice of internal convenience. Now, in my opinion, this is a very mischievous doctrine (hear, hear). If our structures are not fit for their purpose, we cannot hope for much public appreciation, however striking their appearance may be. Architecture, moreover, differs from painting and sculpture in being nearly always intended primarily for utilitarian purposes, and afterwards, and without in any way interfering with these purposes, being invested by the cunning of the artist with those attributes of proportion, beauty, and repose, which convert it into a work of art (applause). Buildings without a purpose, or unfit for that purpose, may, from their artistic qualities, arouse our enthusiasm as antiquaries or archæologists; but, depend upon it, we should look upon them with other feelings if we had had to pay for them ourselves or if we were to try to use them. Architecture, to me, implies art under certain well-defined conditions. If unrestrained by these conditions it lacks its first requisite, its adaptation to certain chiefly human requirements, and becomes a kind of constructive stage scenery. The more closely our students, and in fact all of us, stick to the conditions of the problems we have to solve, while striving at the same time to give our work the highest artistic expression of which we are capable, the sooner, in my humble judgment, will modern architecture secure public appreciation.

The most noteworthy event of the current year is the International Exhibition in Paris. Though its cosmopolitan character has been only partially realised, on account of the abstention of Germany, Austria, and other countries from joining as nations in the show, the French themselves have done wonders, both in the way of exhibits and in the buildings in which they are displayed. Although it may be difficult in every instance to admire the details of some of these buildings either in their form or in their colour, it is only right to pay a tribute of unstinted admiration to their originality, to the acceptance they display of new conditions and new materials, involving new forms and expressions. The domes of the two Palaces of the Fine and Liberal Arts, by M. Formigé, give even more than this. They satisfy æsthetic critical faculties by their pure form and admirable colour, the latter imparted externally by a covering of dull blue and white faïence. The constructive ironwork of the buildings is everywhere visible, and is filled in, not overlaid, by panels of bright buff or pinkish terra-cotta, the ornamentation of which, though it has necessarily suffered from the hurry inseparable from such work, is bold and clever. The Eiffel Tower, so greatly dreaded by the lovers of old Paris,—architects and the public alike,—was, perhaps, to many an agreeable disappointment. I confess it was to myself. Its individuality, its web-like construction, seemed to remove it from all sense of competition with its neighbours of ordinary dimensions in brick and stone. They seemed to hold their own, and were not so disconcerted by its neighbourhood as I had anticipated. Perhaps this arose from the strikingly unusual and fantastic forms of the other Exhibition buildings. As in many another less ambitious fabric, it was not the constructive details of the tower which gave dissatisfaction, but some of the attempts at decoration,—notably, the somewhat awkward and heavy arcading of the galleries, which I think displeases both in itself and in the way in which it breaks the grand sweep of the angles of the tower. No doubt a break in the sweep at this point is desirable æsthetically, but not such a break, I am inclined to think, as the line of the tower has received by the peculiar design of the gallery arcade. Though thus confessing a certain admiration for the tower, I yet feel the greatest repugnance to the prospect of a sister tower being erected in London (cheers). One may look with equanimity on one such colossus as a wonder of the world, without desiring to see it reproduced elsewhere. Another at home would not have the charm of novelty; no such unexceptional site for it could be found in the heart of this crowded city, where it would be nearly certain to prejudice the effect of some of those structures which have been bequeathed to us, and which help to make London, in spite of its skies of fog and smoke, one of the most beautiful cities in Europe (applause). Some eyesores may be tolerated for their undeniable public utility, though needless disfigurements, as Charing-cross station and bridge, which have not certainly improved our grandest river view; but the threatened tower has not even the excuse of a necessary evil.

In the matter of tree-transplanting the Parisians have much to tell us. Nothing was more surprising to me than the vigour of growth and foliage of the immense trees which embower the gardens of the Exhibition, and which last winter had their roots in other places. Moreover, beyond the boundaries of the Exhibition, the trees of Paris are one of the city's greatest charms. If their size and height now in some weathers darken the adjacent houses, their shade and beauty attract crowds which would not otherwise resort to the streets and boulevards where they flourish; and so the shopkeeper perhaps gains more by the numbers of passers-by than he loses in diminished daylight It is devoutly to be hoped that our County Council, when they have time to consider the beauty of London, will see fit to ordain that the wider thoroughfares of the metropolis shall be graced with a mode of decoration at once the least expensive and the most effective that can be used for the adornment of a great city (applause). There is hardly a more beautiful tree in existence than the plane tree, and no place in which it flourishes better than in our somewhat dingy city. Why should not London be known as "The City of Plane Trees"? It is, in my opinion, a great mistake to suppose that trees in most cases hide a building to its detriment. By their contrasting forms they heighten its effect, and this not only in summer but in winter also, when the curves of branch and twig form an admirable foil to the rigid stability of architecture seen through and above them.

But to return to Paris. To me the most interesting part of the Exhibition was a gallery, or rather a pair of galleries, which were not, strictly speaking, part of this year's show; probably they would not have been included among the number of places to which my jury-button was an "*open, sesame*," had not one of them contained the *Exposition Rétrospectif* of French art-workmanship, a collection of both gold- and black- smith's work such as has surely never been brought together before. This most precious collection was exhibited in the covered gallery forming the western wing of the Trocadéro Palace. But it is not of this loan collection of masterpieces in metal-work that I would now invite attention, but to the museum of architectural sculpture, which occupies the whole of the east gallery, and which appears to be destined ultimately to fill the whole of the western also, for across both galleries, at regular intervals, are erected the fac-similes in plaster of the grand stone portals of Charenton, Beauvais, Nancy, Vezelay, Chartres, Clermont, Moissac, Saint-Gilles, Toulouse, and that of the Grosse-Horloge at Rouen among other examples. Through these portals the visitor passes. The eastern gallery is completely furnished already with casts of all that is most interesting in the way of architectural sculpture in France from Gallo-Roman times to the Renaissance, while occasionally, side by side (with apparent intention), are placed casts of sculpture of different ages or from different provinces when it seems specially interesting to invite comparison, showing at a glance not only the differences arising from lapse of time, but in contemporary art, between one province and another; for, according to Viollet-le-Duc, there were twelve distinct schools in France alone in the twelfth century. It is clear that this most fascinating collection owes much, if not everything, to the enthusiasm and learning of Viollet-le-Duc, and to the veneration in which his name is held by those who knew him and who can appreciate his value. To do him honour the Museum of French Sculpture was instituted, on the lines which he himself had indicated, to show the country's gratitude to the man who, more than any other, during forty years "raised up, restored, brought back to life and light," by his labours and his genius, the incomparable historical monuments to be found in every part of France (applause.) At the eastern extremity of this eastern gallery is a vast apartment, the Salle Viollet-le-Duc, in which are hung some of his water-colour plans and elevations of mountain structure,—more marvellous, I think, than even his delineations of architecture; and, besides these, in portfolios, an exhaustless store of studies, sketches, and cartoons from his facile pencil, with the manner and perfection of which we are all more or less acquainted.

It is, perhaps, useless to hope that our Government will imitate the example set them in France, and give us the advantage of a similar educational museum on this side the water, especially as we have at the South Kensington Museum two galleries which contain a variety of plaster copies of celebrated monuments. I would, therefore, strongly commend the Galleries of Comparative Sculpture at the Trocadéro to the notice of the English student. He can there draw under cover, and without molestation, from morning till night; and he can there enjoy the advantage of comparison, so difficult when his models are, it may be, hundreds of miles apart. He can there consider the type of ornament most likely to subserve the development of the architecture of the future, whether natural or conventional, and speculate on the possibility of the more archaic forms offering the greatest attraction to the student of the twentieth century.

This brings me to another subject for our consideration, to which I alluded last year, also associated with Paris, and which, I think, might be greatly assisted if due advantage were taken of all the lessons to be learnt from this museum by the thoughtful student. M. César Daly gave us, at the International Conference in June, an eloquent address on the subject deeply interesting to us all, which he calls "Les Hautes-Études d'Architecture." He said that architecture more than any other art required studies of a various and elevated character, and not only a profoundly learned and philosophic conception of the past but a knowledge of the needs of the present, of their relation to this past, with foresight into the tendencies of the future. The end he would set before us is to penetrate the future of our art—not ignorantly, but by an intelligent study of the relation which its contemporary architecture has borne to the social, religious, and political life of the past. In times like the present, when we may be said to be in a state of transition socially, politically, and religiously, we cannot expect a strong and united architectural expression,—nor do we find it. We belong to diverse schools, classical, Gothic, scientific or rationalistic, and finally eclectic, in which each individual borrows from Antiquity or the Middle Ages, from the East or West, the North or the South, from every age and every country, what pleases his own fancy. This eclecticism, this individualism, is hateful to M. Daly, and he would have those among us who are fitted for the task prepare the way, by a philosophical study of the relation of architecture to life in the past, for an enlightened and earnest practice of it in the future. This would be to put our knowledge and admiration of the past to noble use; it would convert us from mere archæologists into benefactors of the present and succeeding generations. We should then learn to discriminate between what in bygone art was based on constant laws and applicable to our own work and to all time, and what was ephemeral in its nature, begotten of a state of society or religion past, and never to be resuscitated, and with which, therefore, we as practical artists have no further concern. I confess I entirely sympathise with M. Daly in his enthusiasm on this subject, and hope that his earnest appeal may not be made in vain, but

that the more learned among us may apply themselves to studies from which so much may be hoped. The habit of analysis recommended by Mr. Appleton in his admirable Presidential Address to the Architectural Association last year* would tend in this direction, and would prepare the mind of the student for the "*Hautes-Études*" so eloquently advocated by M. Daly.

Mr. Leonard Stokes, in his excellent address as President for this Session of the Architectural Association† has also treated very fully the great subject, annually becoming more urgent and irrepressible, of professional education (applause). He maintained that the time had now come when the Institute and the body he represents should work together more than they have yet done, to effect this their common object,—to prepare for examinations as well as hold them,—and he instanced the desire expressed by the late Mr. Street, in the powerful address delivered from this chair,‡ that the two bodies should be drawn closer together. I commend Mr. Stokes's utterances on this point to the attention of every member of the Institute and the Association, believing, as I do, that the senior and representative body of the architectural profession will do wisely, if the way can be made clear, to give substantial help to those who, during a long and prosperous period, have shown an earnest determination to help themselves. There has also been a proposal, to which Mr. Stokes alluded, that an appeal be made to the public for a large sum to establish and endow a college for the systematic study of architecture.§ Those in favour of the proposal seem to think that not enough is done for the student, and that he is left too much to his own devices. When, in my address at the opening of our last session,‖ I compared what is now done for the earnest student with what was done for him only a generation ago, I confess I was hardly prepared for such a suggestion. It is possible that many who ought, one would suppose, to know what educational advantages they possess, have hardly gone to the trouble of realising them. I shall take the liberty, therefore, on this occasion of briefly enumerating some of them.

In this country there is no single or complete and unalterable course of architectural education, apart from the practical knowledge the student may acquire in the office of his master. I do not think this is to be regretted. You have heard me read the opinion of the English system (or want of system) expressed by the German onlooker. It is better not to be all cast in the same mould,—in fact, as artists, it is most important that we should not be so (hear, hear). There are certain matters, however, that all architects must be versed in, if they are to do their work with ease to themselves and advantage to their employers. Let us see how these essentials are to be secured; what existing institutions will aid the student in his search after knowledge. To begin with this Institute, which is not, and was never intended to be, a teaching body. It holds no classes, and gives no formal instruction. It has no professors, as such, upon its staff. At the same time it does definitely promote and encourage, or, to use the words of the Charter, it "furthers" the systematic education of the young architect,—(1) by its system of examinations; (2) by its annual prizes and awards; and (3) by its library (applause).

In the first place, the Royal Institute of British Architects admits no architect or architect-student to the position of Associate (A.R.I.B.A.) until he has satisfied its Board of Examiners that he has acquired a satisfactory basis of education in design, construction, the nature of materials, sanitary science, the general history of the art, the characteristics of the leading styles, and the methods of modern practice. By the syllabus issued to persons intending to prepare for these Examinations the Council of the Institute are careful not only to point out to the student the outline and scope of the subjects with which he has to make himself conversant, but also to direct his attention to the chief literary and artistic works he should consult, to the buildings he should visit, and to the method in which he should pursue his studies. The Examination he has to undergo is a searching one, both graphic and oral, extending over many days, conducted under strict scrutiny, either here in the rooms of this Institute, or in one of the chief non-metropolitan cities where local societies allied to this Institute lend us their valuable aid for the purpose. Moreover, the Council have now put in force a scheme for three Examinations following each other at intervals of not less than two years,—a scheme which during the past session was submitted to and received the approval of the Institute. The first of the progressive examinations (the preliminary) is to test the general knowledge of aspirants about to enter the profession, thus setting a standard, and, from the nature of the examination being known beforehand, directing education into channels likely to be specially useful. Being then, at the commencement of his pupilage, admitted a Probationer by the passing of this first Examination, his studies for the next two or three years in the office, at home, and at the Architectural Association, instead of being desultory, will be guided by the programme of the Intermediate Examination, an Examination which, by means of testimonies of study and drawings to be submitted, will prove that the student has been diligent in the earlier portion of his pupilage, and is in a fair way of becoming at least an efficient draughtsman, while the Examination itself will test his acquaintance with the elementary principles and practice of architecture both as a science and an art. These two, the Preliminary and Intermediate Examinations, will enable the student with more ease than hitherto to prepare for the Final one, qualifying for candidature as Associate of the Royal Institute of British Architects, after two or three years' further study. By this time he will probably have completed his term of pupilage and passed a further period in some other office so as to see variety of practice. It is believed that these three steps or divisions will make the Final Examination of greater value, and, while still avoiding the groove of an academic course, be a more absolute test of competency than the single Examination hitherto held. Here, perhaps, I may be permitted to forestall the Report of our Board of Examiners, and inform you that for the Preliminary Examinations to be held this month in London and various parts of the United Kingdom, 107 candidates have been admitted (applause): and of these, forty-one, having been declared exempt, are already registered as Probationers of the Royal Institute.

Secondly, the student is incited to effort by prizes offered for the design and construction of buildings or parts of buildings in some prescribed style or for some special purpose; and for the best essays on given subjects. Also by travelling studentships, the winners of which have, according to the nature of the respective studentships, to submit illustrated memoirs on on modern architecture abroad and modern practical subjects generally; studies of colour and decoration; and measured drawings of celebrated buildings at home and abroad. Some of these are of considerable value, and all are open to students, from whatever part of the United Kingdom they may present themselves, with, in most cases, a stipulation as to age. An exhibition of the drawings submitted for these prizes and of the work done by the travelling students is held annually, and this, I venture to think, may be regarded as distinctly educational work.

Thirdly, the Library is open not only to the members of the Institute and the Association, but to all *bonâ-fide* students of architecture. The Institute offers them access to all the more famous books on our art, and to all the smaller educational treatises on architecture, and allows the students not only to consult them in the rooms of the Institute, but, under certain limitations, to take some of them away for home perusal.

In the schools of the Royal Academy the architectural student can, on certain evenings of the week, design a building or part of a building under the direct supervision and instruction of architect-members of that body, who attend in rotation as visitors for that purpose, and prescribe the subjects on which the students are to exercise their powers. The designs thus prepared, or certain of them, are put in competition for Academy prizes, the most valuable of which are two travelling studentships, one of 60*l.* for the study of English architecture, another of 200*l.* for foreign travel, given in alternate years. Probationers are required to draw a subject or two from memory only, which I regard as a most valuable exercise. The students have many privileges, not the least being access to the splendid library of the Academy, and attendance at certain courses of lectures given by the Royal Academy professors.

Then there are the lectures delivered by the Professor of the Arts of Construction at King's College; the three courses on Architecture, as an Art, as a Science, and as Modern Practice, held by Professor Roger Smith at University College; the classes on Scientific Masonry and Applied Geometry at the City and Guilds of London Institute. There are also the pupil-rooms or studios of those private gentlemen who of recent years have begun with much success to supply the needs of those who wish for (and can afford) a more personal attention than can be given by a professor to a large class, or by the visitors to the Architectural Association classes.

It will be seen from what I have set forth that the student of architecture need not now be under any difficulty in ascertaining what is the least he ought to know, nor how he can, with diligence, acquire the requisite knowledge. Familiarity with the practical work of carrying out a building will be obtained in the office of the master whose pupil he is, and original design can be practised at home, in the schools of the Royal Academy, in the classes of the Architectural Association, or elsewhere. What seems to me to be wanted now, more than anything else, is the self-denial and enthusiasm necessary on the part of the pupil to fully avail himself of the advantages and privileges at his disposal.

I have described most of the advantages which a student in London can enjoy if he choose, but I have said little yet about the methods of teaching adopted by the Architectural Association, which have had, in my opinion, remarkable results,—results which, like many other great things done in this country, have been due principally to voluntary effort. The Architectural Association has been a great success, and it is still so much a success that I hope every one of the non-Metropolitan Societies allied to the Institute will soon have connected with it an Association of juniors, similarly constituted, and doing equally beneficial work (hear, hear). Without such teaching bodies to feed a professional Society, not only education languishes, but the Society itself may die of inanition, for I cannot refrain from recording an impression that the great progress which has attended the Institute during the last few years has been largely stimulated by the efforts of the junior body, fostered as they are by the close and cordial relations existing between the Institute and the Association (cheers). In urging upon the allied societies the desirability of organising, or perhaps in one or two cases of developing, classes of instruction for their juniors, I feel I cannot do better than offer them as a model the methods of mutual instruction so long successfully practised by the Architectural Association of London.

At the same time, I can quite understand the difficulties under which the Association labours, aggravated as they must be by the increased obligations entailed upon its committees and officers from the development of our Examinations, followed as they now are by the registration of successful candidates as Probationers, Students, and Associates of the Institute. The chief cause of complaint, it seems to me, is that the many classes held by the Association are not so well attended as they ought to be; and, after reading the Report of the Association Committee for the past session, I have been induced to think that too much is attempted, considering the comparatively limited time which can be given to each subject by students who are occupied most of the day in their masters' offices, and by members of committees and visitors, who have their own business to attend to. Omitting all mention of the classes composing the elementary division, I find that the advanced division consists of at least nine classes of instruction with six courses of lectures, carried on by voluntary labour, chiefly honorary or gratuitous. It is not surprising, therefore, that the elder workers at present taking part in the educational labours of the Association should ask virtually for a re-consideration of the method in vogue, should appeal in fact for the opinion of the senior body, and, if necessary, for its help; while others cry out in the wilderness for a college to be

* Printed in the *Builder* for October 27, 1888.
† See *Builder* for Oct. 26 last, pp. 291-3.
‡ Printed in the *Builder* for Nov. 13 and Nov. 19, 1881.
§ Mr. Earle, the author of the "appeal" referred to, writes to say that he did not propose a college of architecture, but a central building where all opportunities for study and examination could be concentrated.
‖ See *Builder* for Nov. 10, 1888.

raised and endowed by voluntary subscriptions. But if a College of Architecture heavily endowed were to descend upon us from the skies, I am not at all certain that it would be an unmixed blessing (hear, hear). Thoughtful critics among our Continental brethren appear to agree that there is something in the freedom of English study and practice which is at the bottom of the good results they have been willing to signalise (hear, hear). Do not, therefore, let us hastily throw away our birthright. Examine the student to ascertain whether he possesses at least a minimum of the technical education which the most competent among us believe that he ought to possess, that he is able to make a respectable drawing, and to design a fit and convenient building. When this has been ascertained, I submit that the sooner the student is left to his own devices the sooner he will develop his inventive faculty and his artistic judgment. At present, in England, the students come under different influences, and are early thrown to a certain extent on their own resources. They do not all drink at one fountain, as would be the case if we had our heaven-descended college; and, in consequence, there is more individuality about English work than can be found generally in the modern architecture of France and other Continental countries long in possession of that home of architectural learning for which some of us sigh (applause).

But do not suppose that I think everything connected with our profession and professional education in this country is perfect. Far from it. Ours is, I believe, the only great country in Europe which does not utilise its national buildings and monuments for educational purposes. Her Majesty's Office of Works and Public Buildings, with its branches in Edinburgh and Dublin, appears to be the only department of the kind, among the great nations of Europe, that has no educational aim or influence. This department resembles too much a professional architect's office, though of course on a gigantic scale, for it is entrusted with the design and execution of buildings, at the cost of the nation, in every part of the United Kingdom,—buildings which in countries less wealthy than our own are, so to speak, schools of architecture,—where the architect-student who has won honours during the early years of his career takes a subordinate place by right of merit, with the possibility of rising from the grade of Inspector to that of Assistant Architect, then to Architect and Architect-in-chief. Ours, too, is the only great country in Europe that settles the artistic character of its national buildings at the fag end of a Parliamentary session, by a party vote, in Committe of Supply, often after a public discussion, in the columns of a morning paper, by persons perhaps the least competent to understand the subject (laughter). In this country there exists no Board analogous to the French "Council-General for Civil Buildings," the members of which still meet twice a week in Paris, and have done so ever since the foundation of the Council by the Minister Colbert, some 225 years ago (hear, hear). A similar Building Council, appointed by the Government, and partly composed of professional architects, is wanted in London. To serve thereon would, as in France, be considered the highest distinction, for obviously the honour would be only offered to those whose technical training, artistic judgment, and tried impartiality were beyond question.

I know that much may be said both for and against a more extended control being exercised over the architectural features of a city, and of the participation by a large professional element in such control. It may be opposed to English practice and prejudice to give the professional man this power; but, on the other hand, it is most difficult for the unprofessional mind to judge correctly of the probable effect of a building from an inspection of technical drawings.

More is wanted than an Architectural Council for National Buildings. A special tribunal for the consideration and settlement of building cases is also required. We are daily threatened with structures of abnormal height. Does it not behove us to consider the propriety of such structures, not from an artistic point of view alone, but also from one of health? It is not as if we were in London constructing a new quarter. Everywhere we are surrounded by existing buildings, generally of a costly character, many of them displaying artistic excellence, while a few are of quite unique excellence. Ought such buildings to be sacrificed by the growth of these upstarts? Are we prepared to see London, by the introduction of these buildings on stilts, lose all sense of harmony and proportion? This question and that of rights of light and air are doubtless difficult to deal with, but they will have to be considered, probably when a vast amount of mischief has been done and cannot be undone; and the sooner some constituted authority takes them in hand the better. We are not unlikely to see square blocks of offices and chambers of, say, 200 ft. high springing up in our midst, as we hear of them already in the cities of the New World, where they cannot do so much harm as they would here (laughter). The Romans were a wise as well as a practical people. Augustus forbade any house in Rome being built higher than 70 ft.; Trajan restricted their height to 60 ft. Why should not we deal with this and similar questions in the same spirit, and so stem the tide of self-interested tower-building and vulgar self-assertion, and give people who have already done so much to beautify our cities some protection, some assurance of immunity?

We all are proud of the freedom claimed by the free-born Briton to do what he will with his own, and are very jealous lest our liberty of action should be interfered with; but, nevertheless, the law in some cases steps in to prevent individual action when it affects the senses of the public prejudicially. I say in some cases; because, though the organ-grinder can be made to desist from plying his trade in the street at the door of a man who complains of the noise, the newsboy may yell into your ear with impunity, and there is nothing at present to prohibit the owner or occupier of any house erecting, with his landlord's consent, any sort of vulgar advertisement on his property (hear, hear). So long as such an advertisement only outrages good taste and spoils the look of the advertiser's own premises, some people may argue that it need not be interfered with; but when, by soaring into the air, it not only hides the precious sky from the public view, but perchance by its ugly letters, each the height of a man, and apparently suspended by some demoniacal agency, shuts out the prospect of some gem of architecture by which, out of his own pocket, a neighbour has contributed to the happiness of every appreciative passer-by, is not the case much aggravated? When the advertisement fanatic indulges in such excesses, it appears to me that something should be attempted in the way of wing-clipping to stop such aërial flights. The upper end of Regent-street, within the last year or two, has been at times disfigured by an immense red banner advertisement, stretching across the street from house to house, so as to entirely destroy the fine effect of Nash's Church at the end of the vista.

The sense of propriety and refinement possessed by a portion of the public is powerless to restrain such vulgar exhibitions; and I submit that, for the sake of the architectural effect of our cities, upon which so much wealth has been, and is being, lavished, we should be no longer apathetic. A remedy, if remedy there be, should be found. Were advertisements taxed in some ratio to their obtrusiveness much good would no doubt be effected; but, beyond this, it appears to me that we want some constituted authority to which individuals feeling themselves aggrieved might refer any act of vandalism, any offence against artistic propriety or educated public taste. It is to a constituted authority that matters of this kind, and others like them, should be referred, and they would thus be settled, I think, with less ill-will than is engendered by a correspondence in the daily newspapers.

In default of a proper authority, this Institute has done what it could wherever it thought its action might be of any avail in the improvement of the metropolis, or the preservation of existing buildings of merit, as, for instance, in the question of the site for the National Portrait Gallery, pointing to the advisability of closing Hemmings-row and so adding to the space available for a building likely to be of great interest,—and due to the public spirit and generosity of a single private individual,—which would thus have had a fine frontage facing Charing Cross-road. In our interposition for the preservation of St. Mary-le-Strand, we may flatter ourselves that our action has not been without result, as the report of the Committee of the County Council is in favour of the removal of all the houses between Holywell-street and the Strand, thereby opening up a fine view of both this beautiful church and that of St. Clement Danes, and allowing of east-going traffic passing on the north of both churches. I hope that the hint thrown out by Mr. Herbert Carpenter in our *Journal of Proceedings*, that the space thus cleared between the two streets should be planted, somewhat in the manner of the Rambla in Barcelona, with a double row of plane trees, may be carried out, as it would immensely add to the attaction of what cannot fail to be a most desirable and unquestionable public improvement.

The great measure of Local Government passed by the Legislature during the Parliamentary session of 1887-88, would have increased the boon it has conferred on the nation had it included provisions for testing the qualifications of architectural, engineering, and building officers appointed under the new Act. Since the year 1855, when the Metropolitan Building Act now in force became law, the Institute has been the constituted authority for conferring certificates of competency, after careful examination, upon candidates for the office of District Surveyor in London; and since that time no one has been appointed to the office unless he held our certificate, which is now regarded, I have every reason to believe, as substantial evidence of qualification. Following the initiative of the Metropolitan Building Act, local Acts of Parliament, such as the Eastbourne Improvement Act, 1879, the Willesden Local Board Act, 1887, and others, have contained a clause to the effect that every candidate for the office of Building Surveyor or Inspector shall hold a certificate of competency from the Royal Institute of British Architects, or from other bodies which are named in those Acts. Now, during the last few years we have added to our examination of candidates for the office of District Surveyor in London, an examination for that of Building Surveyor or Inspector under local authorities, and the Institute has granted several certificates of competency to persons who have been examined for the purpose. Such examinations, instead of being confined, as they are at present, to a few candidates, should, I think, be made applicable, by statute, to all; and an excellent provision, found only in the Metropolitan Building Act and a few local Acts of Parliament, should be applied generally throughout the country, in order to insure the efficiency of all technical officers employed by the Urban and Rural Sanitary Authorities. As I have already respectfully urged in a letter to the President of the Local Government Board, it is under the control of those officers that the vast majority of dwelling-houses throughout the United Kingdom are erected, and mostly by speculators, who, though they may employ an architect to make the designs or sketches for such buildings, do not allow him to superintend their erection. We must, therefore, all agree that, on this ground alone, it is incumbent on the Government to enforce the technical examination of candidates for such offices; and I need only add that the Institute is prepared to hold and develop its statutory examinations of candidates for the office of Building Surveyor under local authorities, so as to accommodate such candidates, not in London alone, but in all parts of the United Kingdom.

It would be impossible for me to catalogue all the works of conspicuous merit in progress throughout the country during the past year, even if I had the requisite personal knowledge of them; but I trust I shall not be thought invidious if for a special reason I make some mention of a building which I have recently seen and been deeply impressed with, and which I venture to predict, like all other thoughtfully-designed and original work, will have its effect on the architecture of the future. In it is shown what terra-cotta is capable of, in a way I have not seen out of Italy, nor I think even there. It shows, further, that there is still, or, let me say, once more alive amongst us pure inventive art, an art with nothing extravagant about it, but clothing the building with details of exquisite beauty, dictated by necessity, and designed to meet the peculiarities of the materials employed without slavish regard to precedent. When last I saw this building, at sunrise on a bright October morning, when it could be seen unaffected by its smoky surroundings, I felt proud to know that the Birmingham Assize Courts was the work of our Honorary Secretary, Mr. Aston Webb, and of his able coadjutor Mr. Ingress Bell.

If I might venture to criticise a creation of

so much beauty and originality, it would be to say that in my humble judgment the detail is a trifle too delicate for the atmosphere of a smoke-begrimed city, though on that matter of detail I would not now insist; but rather on this, that if we all as architects gave the same amount of loving attention to our work that has been bestowed on this, and brought the same inventive genius into play, we should not long have to wait for an appreciative public (hear, hear). We hear the complaint raised in all quarters that the public cares nothing for our art, and the way in which our buildings are sometimes treated bears witness to this; but are we sure that the fault does not, in some measure, rest with ourselves? Do our buildings tell their own story with sufficient distinctness, are their details always designed to suit the materials employed, and is the ornamentation the product of our own invention? The consideration we receive may not equal what we conceive to be the merits of our art, and I do not think it is in some cases. Indeed, I have been told by a citizen of Birmingham that for his part he did not care for the building I have just singled out for commendation, nor did he think it had created much enthusiasm among those for whom it is intended! (laughter). It will be a work of time to awaken an interest in our art; but I do most certainly believe that public interest will be aroused if we are only true to ourselves, if we strive to be more inventive, when invention is required, and determine that everything we do shall be of our best.

My impression, moreover, is that we are surely advancing. The education of our students is now based on something of a system, and we see among the productions of some amongst us a true artistic sense of the beautiful overlaying a desire for the fitness of their work as means to a useful end. There never was a time when there was a higher tone in the profession, when the necessity for clean-handedness was more generally understood. The regret everywhere felt among us if a member of our body forgets or disregards his obligations in this respect is to me a proof of the rarity of the occurrence. I think, therefore, we may take a hopeful view of the future of the profession. Its progress under its altered circumstances during the next few years will be watched by many of us with interest, and with a few, perhaps, with some anxiety also, lest any part of the new machinery should fail to work quite smoothly. Should that be the case, we have happily those who devised it at hand to set it right. A natural fear may, of course, linger, lest the inventive artistic faculties which every architect must possess in some degree should not have free play in the course of our examinations; but if this is guarded against by the present system I see nothing to prevent our noble profession achieving in the near future great results.

Sir Arthur Blomfield, A.R.A., at the conclusion of the address, said:—Gentlemen,—I feel it an honour to be asked to undertake the pleasing duty of proposing a vote of thanks to our distinguished President for the able address we have just heard. I am sure that all who listened to it must have done so with very great interest and pleasure. A good deal of the subject-matter which we have just heard must give us ample food for reflection for some time to come, and I think that the President has shown us that we have great grounds for satisfaction and for hopefulness (applause). He has shown us that we have a very bright and cheering prospect for the future, and the account of what has been accomplished during the first year of his tenure of office will, I think, bear favourable comparison with the record of any year since the foundation of the Institute. Amongst the interesting subjects to which he has referred, perhaps the most interesting, and the one which we can view with the greatest satisfaction, is the subject of the Examinations. These have met with a degree of success which far exceeds any reasonable expectations which could have been made of the results possible in so short a time. I need not remind you that that success is due entirely, or nearly so, to the admirable manner in which the whole scheme has been thought out, the machinery prepared and organised, and the Examinations conducted, by those gentlemen who have devoted themselves with untiring energy to the work, and to whom the profession owe a deep debt of gratitude (applause). With regard to professional education, I was glad to hear our President raising a note of warning against too hastily abandoning our English system,—or, as he said, want of system,—which has been going on for so long, in favour of new ideas and methods borrowed from Continental sources. I think with him and many others that a too-hasty launching on that course of innovation may land us possibly in evils greater than those we wish to correct (hear, hear). We all recognise that evils exist, but I myself, and many others, think they may be remedied by slower and gentler means (applause). This is not an occasion which I should choose to mention any matter personal to myself, but I feel that, under the circumstances, you will excuse me if I, for a moment, refer to a point mentioned by the President, viz., the honour which the Queen has been pleased to confer upon me (applause). The President mentioned it in a most kindly and generous manner, as he was sure to do; but, Gentlemen, when I consider the many important and beautiful works which have been carried out, and the high services to art rendered not only by himself, but by others whose names it would not be becoming in me to mention, I cannot help feeling deeply and regretfully how very insignificant are my own qualifications to distinction in this respect ("No, no!"). I may, say, however, without vanity, that I have a great love for my art, and a great regard for the noble calling to which I am proud to belong—(applause)—and if I might venture to think that in that respect you may consider me to be not unworthy of being one of the representatives of the profession, I should feel a satisfaction without which the honour would be but an empty one (applause).

Colonel Edis, F.S.A., seconded the vote of thanks, and complimented the President on the thorough manner in which he had dealt with the subjects touched upon. He was glad the President was not in any sense inclined to favour any college, whether Heaven-sent or otherwise, because the art of this day and generation in England must attribute its success to the individuals who had carried it out. If people were more unbiassed by the narrowness which led them to admire everything on the other side of the Channel, they would acknowledge at once that this London of ours was one of the most picturesque cities of the world.

The vote of thanks, on being put to the meeting, was carried by acclamation.

The President, in reply, said:—Gentlemen, I feel deeply indebted to Sir Arthur Blomfield and Colonel Edis for their kind and too flattering words, and to you for the way in which you have responded to them. I feel I owe you an apology for making so much of the educational advantages of the student ("No, no!"). But my remarks were not intended so much for your eyes as for those students who may by chance see my address. I should like also to endorse what Sir Arthur Blomfield said about our gratitude to the Educational Committee for the exertions they have made, and which have been so eminently successful. Of course, the fact of those exertions having been made during the year of my presidency is a mere accident. I cannot flatter myself that I have had much or anything to do with the work of the Educational Committee, though I feel very proud to have been your President at the time when the labours of the Committee have been brought to such a successful issue (applause).

The proceedings then terminated.

Society of Arts.—The opening meeting of the Society of Arts will be held on Wednesday evening, November 20, when an address will be delivered by the Duke of Abercorn, C.B., Chairman of Council. The papers fixed for reading at the Wednesday evening meetings before Christmas are as follows:—November 27, "Scientific and Technical Instruction in Elementary Schools," by Dr. J. Hall Gladstone, F.R.S. On this occasion the Right Hon. A. J. Mundella, M.P., will take the chair. December 4, "Rabies and its Prevention," by Armand Ruffer, M.D. December 11, "The Paris Exhibition," by H. Trueman Wood, M.A., Secretary to the Society. Sir Philip Cunliffe-Owen, K.C.B., will preside. December 18, "London Sewage," by Sir Robert Rawlinson, K.C.B.

The Art Congress at Edinburgh.—Mr. Briton Riviere's presidential address in the Section of Painting at the Edinburgh Art Congress is again unavoidably held over.

Illustrations.

DESIGN FOR NEW FAÇADE FOR MILAN CATHEDRAL.

THE accompanying view shows the proposed rebuilding of the white marble *façade* of the celebrated Duomo, it being one of the fourteen premiated designs in the late international competition, the particulars of which have appeared in this journal. The original drawing was exhibited in the Royal Academy exhibition of this year.

In the opinion of the judges, the style of this design was not sufficiently in accord with the existing architecture and its detail, an opinion to which the author of this design is disposed to give a qualified assent. It was thought by him desirable to avoid the endless repetition on all sides of the fussy, intricate, and incongruous details of the general structure. All other good examples of cathedral architecture have, for main fronts, separate character of their own, original and distinct from their other fronts, without being out of harmony therewith.

The accepted design has certainly the merit of full accordance and similarity with the present work, even to the extent of being remarkably like the front now condemned—the great sprawling, depressed gable—flat, unbroken front, stiff tracery and attenuated pinnacles are reproduced here. Remove the Italian Renaissance doors and windows of the present *façade*, and by the substitution of Gothic ditto, a very creditable *façade* would result, at an extremely moderate expenditure. D. BRADY.

THE LADIES' RESIDENTIAL CHAMBERS, CHENIES-STREET.

THESE chambers have been built by a company formed to provide better accommodation in the way of residences for educated women of limited means living in London and earning their own livelihood. The building consists of two, three, and four-roomed self-contained flats, each complete in itself, including a scullery, and, in the larger sets, a kitchen, a w.c., dust-shoot, larder, cupboard, coal-bunker, &c. The entrance in Chenies-street leads to a hall and spacious stone staircase, both lined to a height of about 5 ft. with glazed pattern tiles; from the landings the different sets open on each floor.

On the basement floor is a "common room" or club-room, where meals are served to the tenants at moderate prices, and attached to this is a capitally-appointed kitchen.

For sound-deadening and fireproofing purposes the whole of the ceilings and many of the walls are lined with silicate cotton and plaster slabs on Mr. R. W. Hitchins's system.

Externally the building is faced with red brick, with Portland stone for the quoins, cornices, doorway, &c.

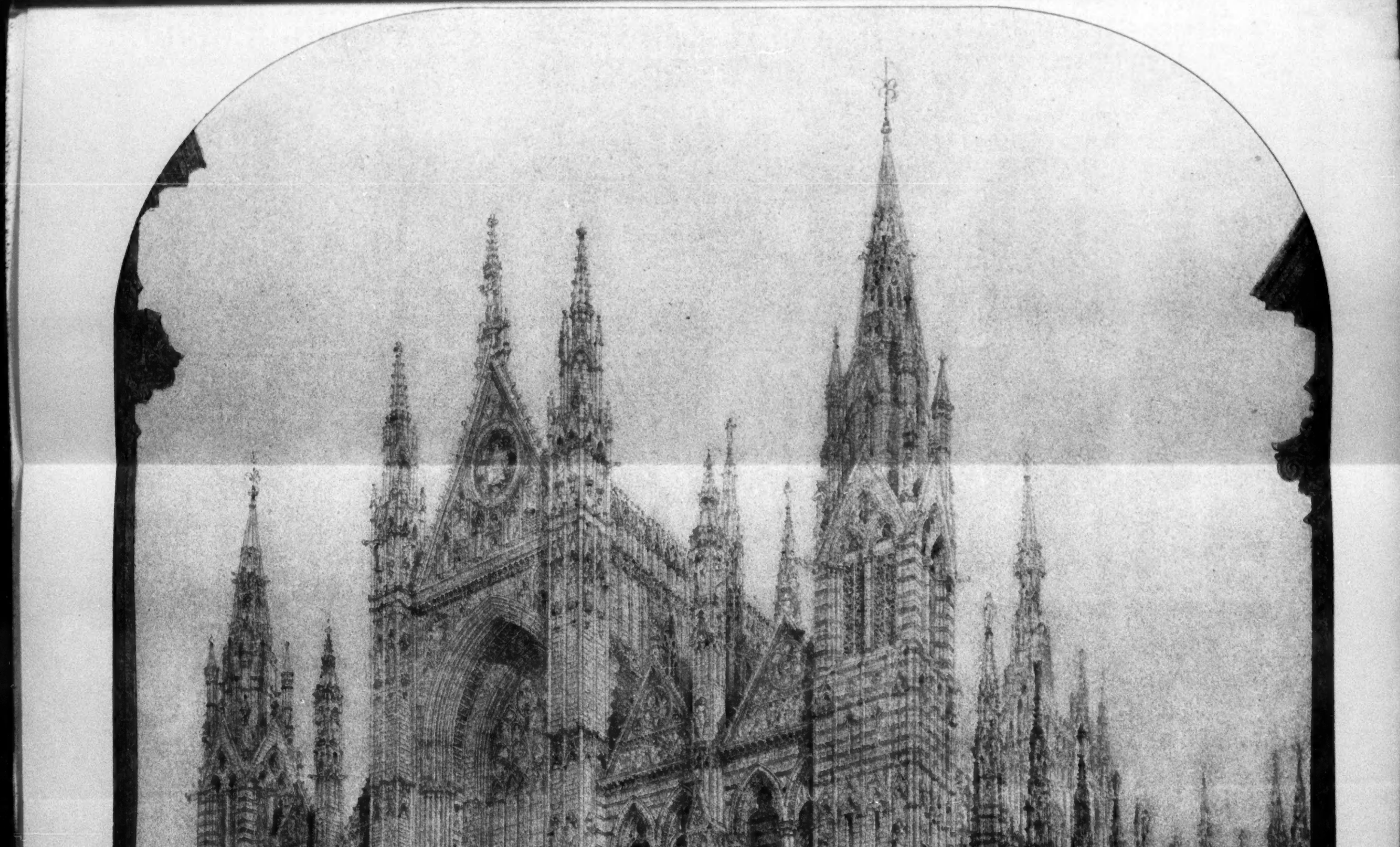
The general contract has been carried out by Messrs. Brass & Son; Messrs. Wenham & Waters, of Croydon, doing all the internal plumbing, gas-fitting, and bells; and Mr. Thos. Elsley the wrought-iron railings and the grates throughout, all under the superintendence of the architect, Mr. J. M. Brydon.

Our illustration is taken from a drawing which was in this year's Royal Academy Exhibition.

PROJECT FOR WINDOW, CHESTERFIELD CHURCH.

THE general idea of this design was suggested by the Te Deum. At the bottom, in the centre, is the Crucifixion, flanked by Adoring Angels; and on one side the Nativity and the Baptism of Our Lord, on the other side the Resurrection and Ascension. Above the Crucifixion is Our Lord in Glory, his throne supported by Cherubim and surrounded by a rainbow. At one side, Apostles and Prophets; at the other, Martyrs and the Holy Church. Adoring Angels close the subject on each side. Above Our Lord, in the tracery, Angels with censers, offering the "prayers of the Saints" and palms of victory. Above the three lights on each side, the symbols of the Evangelists and Cherubim. The colour is largely composed of varied rubies and dark blue, with a still larger proportion of varied whites and stains, which experience teaches is always a successful combination for a large window. Unfortunately the camera reverses these contrasts to a great extent; for instance, the Cherubim in the Ascension are pale ruby on a dark-green blue, and the hills

PROPOSED NEW WEST FAÇADE FOR THE DUOMO, MILAN—ONE OF THE PREMIATED DESIGNS.—Mr. Daniel Brade, F.R.I.B.A., Architect.



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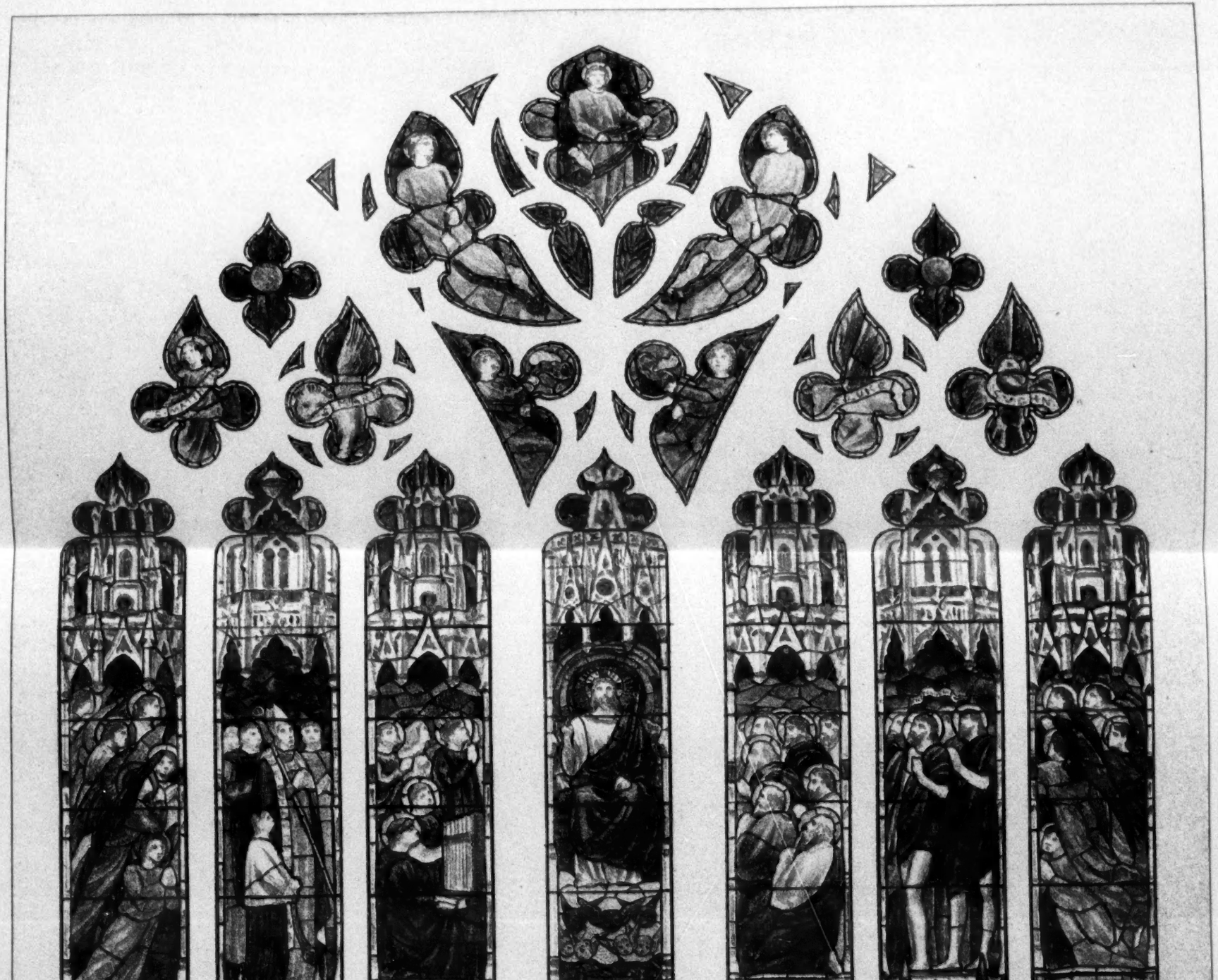
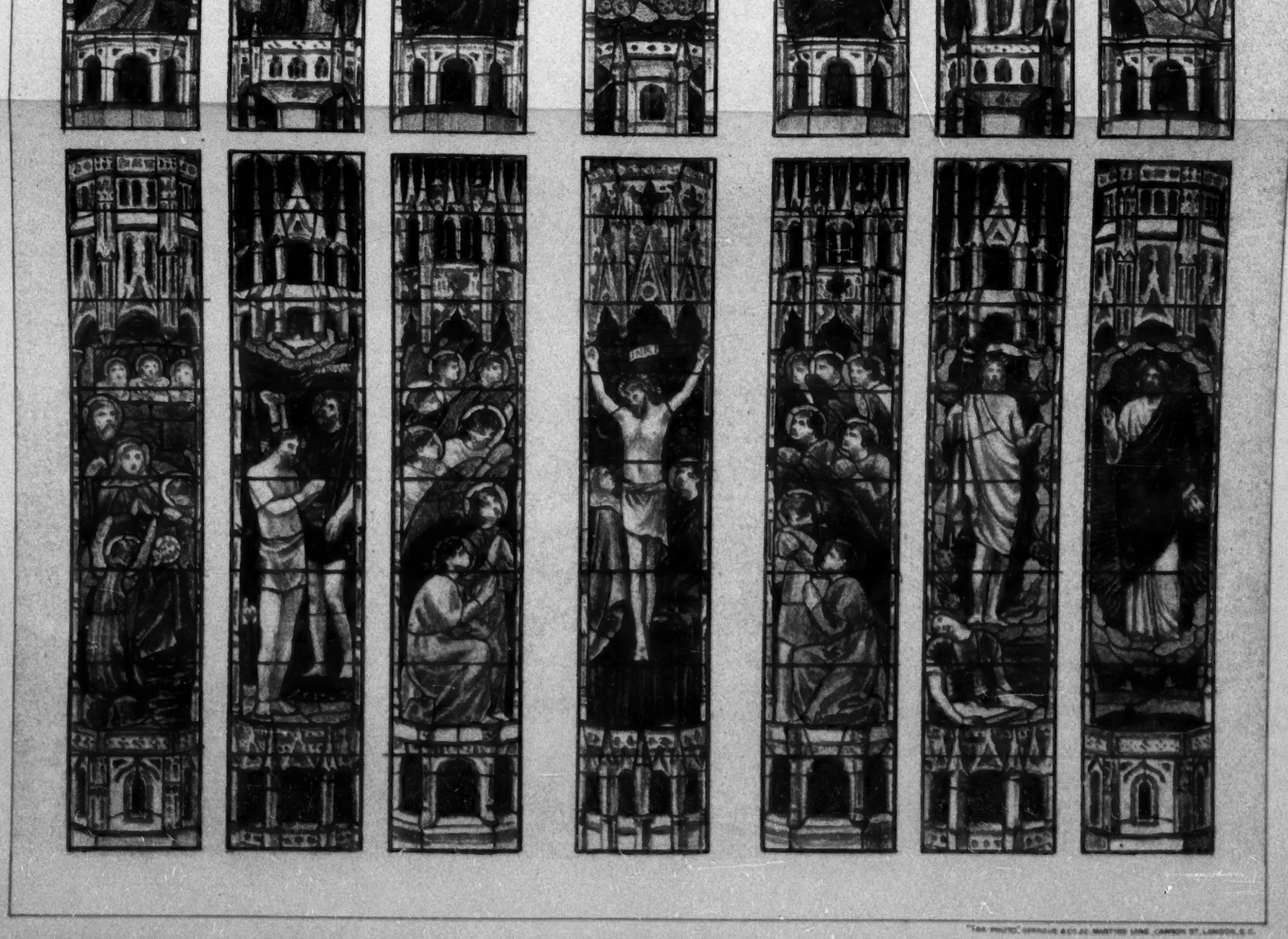
LADIES'
RESIDENTIAL CHAMBERS
CHENIES STREET.
W
J. M. Brydon.
Architect.

PHOTO-LITHO. SPRAGUE & Co 37 HARTING LANE CANNON ST. LONDON, E.C.

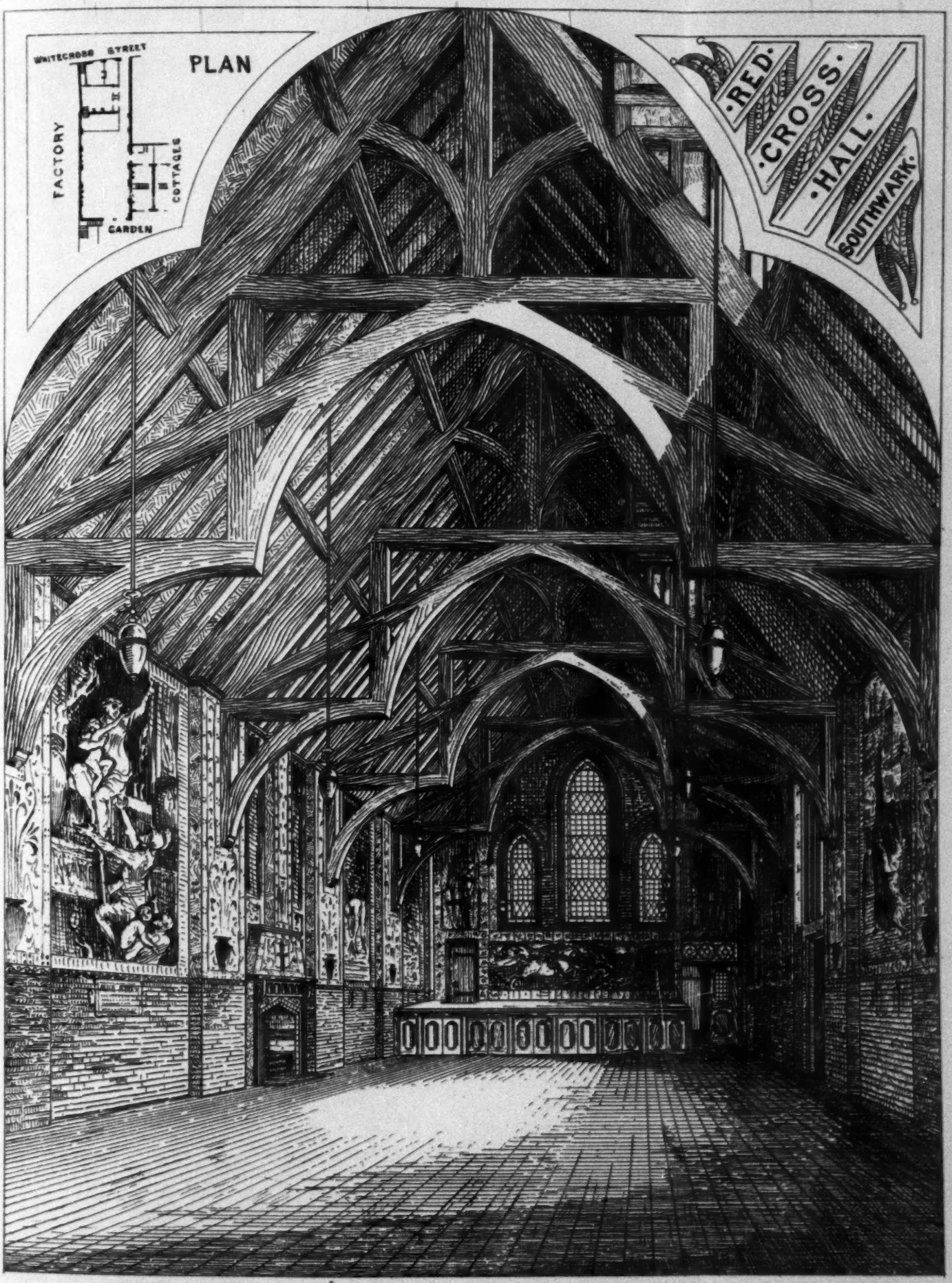




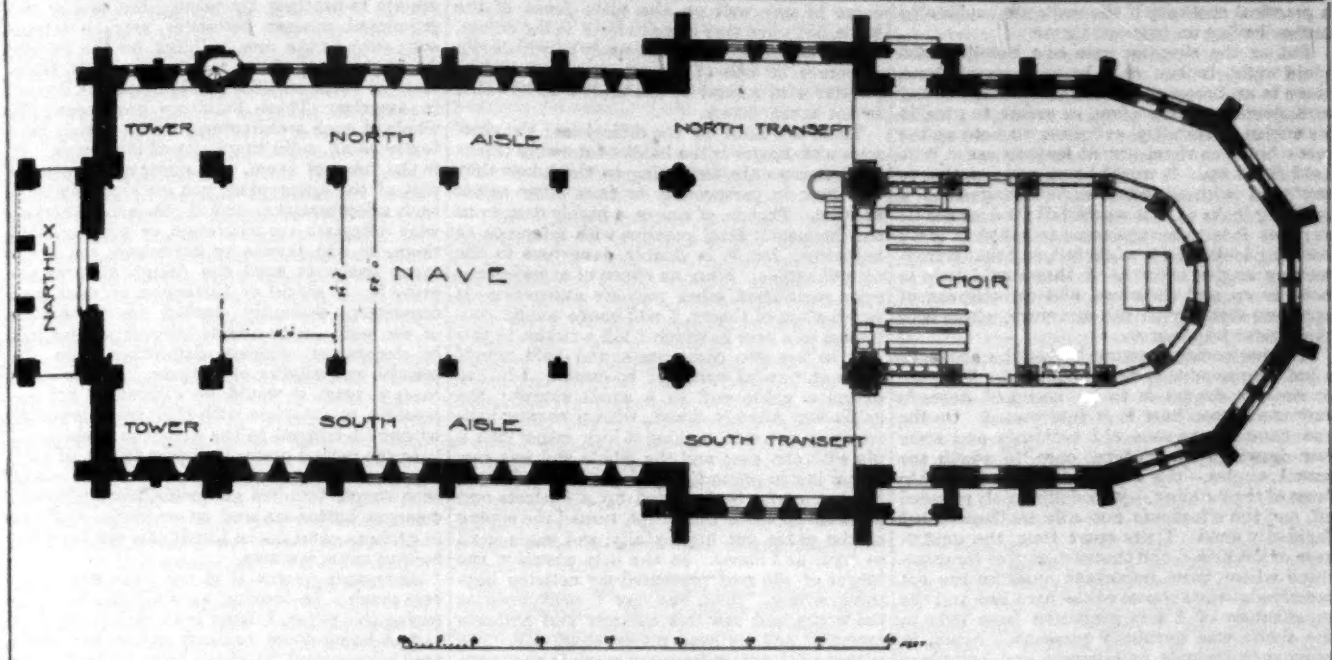
PROJECT FOR THE WEST WINDOW OF CHESTERFIELD CHURCH.—By Mr. F. Hamilton Jackson.

·COTTAGES·AT·Little·Suffolk·Street·Southwark·for·the·Revd·T·C·V·Bastow·

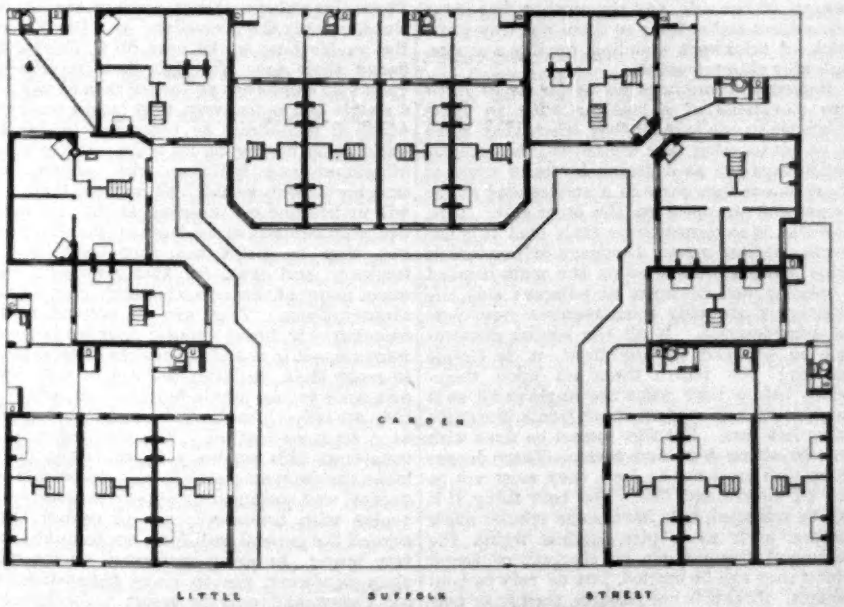
E·HOOLE·F·R·I·B·A·ARCHT



THE REDCROSS HALL, SOUTHWARK.—Mr. E. Hoole, F.R.I.B.A., Architect.
The decorative paintings by Mr. Walter Crane.



Honolulu Cathedral: Plan.—Messrs. Carpenter & Ingelow, Architects.



Cottages, Little Suffolk-street, Southwark: Plan.

below a green of the same tone as the sky. In the photo-lithograph the cherubs and the hills come out dark, and the sky light. The great variety in the canopies was dictated by a desire to make the window a whole by carrying the colour across the transom in large patches, the ground of the lights being alternately ruby and blue. The plate is reproduced from a colour sketch of the same size, which was in the Royal Academy Exhibition.

F. HAMILTON JACKSON.

COTTAGES AT LITTLE SUFFOLK-STREET, SOUTHWARK.

SEPARATE cottages are greatly preferred by the working class to sets of rooms in a block of industrial dwellings, where the inmates are very much thrown together on public staircases, &c. Some small houses having been removed in little Suffolk-street, Southwark, afforded an opportunity for building cottages, which have been planned to leave an open space in the centre of the site for trees and seats, upon which the front windows of the cottages look out, while each cottage has its own yard in rear, containing wash-house, w.c., &c. Messrs. Macfarlane Bros., of Hornsey-road, have carried out these cottages, which are now occupied, and are under the management of Miss Octavia Hill, who collects the rents for the owner, the Rev. T. C. V. Bastow. Red brick has been employed for the walls of the ground story, the upper floors being either rough-cast or tile-hung. The roofs are covered with red tiles, and lead quarry glazing has been used in the windows. Mr. E. Hoole, architect, has designed and superintended the erection of these buildings.

RED CROSS HALL, SOUTHWARK.

RED CROSS HALL, which adjoins a public garden between Red Cross-street and White Cross-street, Southwark, has been built for Miss Octavia Hill and a body of trustees, who have also laid out the garden. Both hall and garden are designed for the use of the tenants of a number of adjoining industrial dwellings and cottages, of which the Ecclesiastical Commission are the ground landlords. The hall is used for a variety of purposes, being reading-room, gymnasium, and concert-room by turns. Adjoining the hall are club-room, committee-room, and caretaker's rooms. Mr. Walter Crane's decorations will, when complete, be the most interesting feature of Red Cross Hall. The subjects are taken from deeds of heroism in the daily life of ordinary people, and are not fanciful, but are records of real occurrences. Among the subjects will be seen Alice Ayres, the nursemaid, a local heroine, rescuing her master's children from the flames, in which she herself perished. Another panel will represent the navvy who removed a fallen mass of rock from the rails, but was himself struck down by the train he had saved. Ten subjects of this kind will be treated in a very striking and decorative manner, with great richness and force of colour. The paintings will be executed on large panels of fibrous plaster, which will then be attached to the walls and finished in place. Those parts of the walls and piers not covered by these groups will be decorated from Mr. Walter Crane's designs in colour to harmonise with the figure-subjects. The Hall has been built by Messrs. MacFarlane, of Hornsey-road, from the plans and under the superintendence of Mr. E. Hoole, architect.

HONOLULU CATHEDRAL.

LAST week we published a double-page view of the west front of this cathedral, which is now being erected under the direction of Messrs. Carpenter & Ingelow, architects.

The accompanying plan, which was sent too late for publication at the time, was prepared to show the church in its completed state, and, with some modifications, the work has been or is being carried out in accordance with it. Only the plan of the church itself is here given. The chapter-house, sacristy, vestries, cloister, and other buildings usually annexed to a cathedral would be placed on the north side; but all these are left to the future.

THE TREATMENT OF ANGLES AND TERMINAL FEATURES.*

WHEN the design of a building ceases to depend for its effect solely upon the grouping of the parts and features, or upon their proportions; when, in fact, it becomes a question of adding something in the way of ornament, or of modifying form to produce an ornamental effect, certain parts of the building immediately offer themselves for treatment. Of these parts the angles are sure to be among the most prominent. They are the terminations of the several faces, and, which is more important, two of them must, in every view, form the terminating features of the whole composition; they are, too, the points at which, if a change of architectural treatment is required, that change must be made. An angle is generally even more important than the middle of any front, for while the latter is important to one face of the building only, the treatment of the angles affects the whole.

It is customary to say that the angle of a building requires strengthening — apparent strengthening, that is, for, as a matter of fact, it is, in many buildings, one of the strongest parts of the walls. This want is greater if the walls are much cut into by large windows that appear to destroy the horizontal tie, and again greater if they are practically reduced to a series of piers, as in many buildings for business purposes, where light is of extreme importance; and it becomes

* A paper by Mr. F. T. Baggallay, F.R.I.B.A., read before the Architectural Association on the 1st inst., as elsewhere mentioned.

a practical necessity if the walls are cut into by arches having an outward thrust.

But in the simplest case of a building with plain walls, broken only by ordinary windows, there is an immense æsthetic advantage in any arrangement which gives, or seems to give, to its angles a stability sufficient to hold up the mass between them—or at least to assist it to hold itself up. It would be an exaggeration to say that without some such arrangement a building looks as if it would fall; it does not do so; but it is no exaggeration to say that every building looks as if it *might* fall, and that sturdy-looking angles seem as if they would help to hold it up, and therefore add an element of apparent stability to the structure, which is of the utmost importance.

Another common saying is that the angles of a building require to be emphasised. Whether or no this dogma is to be accepted depends very much upon how it is interpreted. On the one hand I have seen old buildings and some few drawings of modern ones in which the actual angles,—the arrises dividing two main faces of the building,—were deliberately rounded off, and the effect was not only inoffensive but decidedly good. Quite apart from the quaintness of the idea,—and that always goes for something where more important qualities are not sacrificed,—the absence of the hard line and the substitution of a soft gradation from light to the shade was decidedly pleasant. Again, in using such features as pilasters and buttresses at angles, it is always more effective to plant them a short distance within the faces, and leave the actual angle severely alone, rather than to put them absolutely on the angle. In the case of the pilasters this arrangement gives three arrises instead of one, and in the case of the buttresses three instead of two; in both cases serving rather to confuse the actual angle than to emphasise it.

But if we understand that it is a point in the design rather than the particular line which is to be emphasised, then no maxim of design is worthy of greater respect. There is no sort of design, architectural or otherwise, more poverty-stricken and contemptible than that which seems to come to no definite conclusion, and to have no bounds which it might not overstep; which looks as if, supposing it to be a street front, it might be continued up the whole length of the street. We are all familiar with this kind of design in street fronts, in which the windows, piers, columns, pilasters, and other features are all set out at equal distances, all the same width and similar in design; fronts which look as if they were slices cut from a huge bar or sheet, and sold by the lineal yard, like calico or wall-papers. Sometimes there is a central feature with a slice of the "stock article" on each side; but that does not help much; the whole affair looks like the middle of a design without the ends. It, in fact, cannot be called a complete design at all. The effect is not quite so noticeable in detached buildings, but even in them it is sufficiently disagreeable.

An angle, therefore, demands especial treatment, and is the architect's opportunity. But it is also prolific of difficulties and dangers; and the success or the reverse with which a designer seizes the opportunities, overcomes the difficulties, and escapes the pitfalls, is no mean test of his skill. Some of the difficulties that occur at angles are familiar to every student. There is the Greek Ionic capital, the volutes of which have to be so awkwardly bent out. There is the difficulty in spacing triglyphs and modillions at angles, to say nothing of the corner dentil; and there is the enormous projection of every cornice when seen across the corner, made so much worse when there is a corner column beneath it. One may take it as a good safe rule that columns at corners should be avoided if possible. The Greeks, it is true, used them in their large peripteral temples, but for one thing the Greek columns had such an excess of strength that any little comparative weakness of appearance, due to position, was of small importance; and, secondly, the introduction of a fresh feature at the angle would have been fatal to the simplicity at which they especially aimed. But the Greeks, too, showed their appreciation of the fact that angle columns do naturally look weak, by giving them an inclination inwards, and by making the intercolumniations at the corners comparatively small. One may draw one more illustration of a difficulty in dealing with an angle from Classic and Renaissance architecture. It occurs in the internal angles of buildings, the interiors of which are decorated with pilasters. Pilasters or antæ come in very well on the plain faces of the walls, but when they come to meet in the corner, one is very apt to get an exremely ugly little slip or corner of one of them; or else a sort of pilaster with a bend up the middle of it, which is not much better.

These are some of the difficulties; the chief source of danger is the habit of drawing things in elevation only, forgetting to think how they will look in perspective, or from other points of view. That is, of course, a highly dangerous and frequently fatal practice with reference to anything; but it is doubly dangerous in the case of angles. Since an ounce of experience—even sometimes other people's experience—is worth a ton of theory, I will make public confession of a case in which I fell a victim, in this way, to my own carelessness, and hold myself up as an "awful warning" to others. I had to design a gable end to a small church; the gable was already drawn, with a narrow bell-turret on one side, making it look rather like a pig with one ear; and the whole end was, too, rather low in proportion, being cut in half by a narthex roof. So I carried up a buttress and pinnacle opposite the turret, turned the coping of the gable out horizontally, and made it all as high as I dared. In the side elevation the height of the roof prevented my noticing anything wrong. Well, one day I went down to the works, and saw this buttress and pinnacle executed, and my heart almost stood still. The buttress did not project very much in the upper part, and the gable wall was only 9 in. thick, so the whole thickness from back to front was only about 18 in. To make matters worse, I had no parapet on the side, and the overhanging eaves came down rather low; so there was this great stick of brickwork standing up like a square, tall, ugly chimney-stack.

Beginners sometimes go so far as to draw two elevations of a building with so little reference to one another that, when they come to be put together, they will not fit; the cornices and strings are at different levels, or some of those on one face come to a sudden stop at the corner and disappear on the other side. This, however, is so elementary a fault that it is not worth dwelling upon. If strings or cornices or other features are wanted on the main-front of a building, and not upon an adjacent side, the manner of stopping them requires very careful consideration. If all the similar features can be confined to one front, it is simple enough; you return them all upon themselves before they reach the angle at all, as is so often done in modern street fronts, the angle being left bare. But this cannot be done with an odd string here and there. There is one thing that must not be done, they must not be cut off square and left. The best thing, if it can be managed, is to have some special angle feature, such as a pier, against which the horizontal features can be stopped, or round which they can be carried, just as may be convenient. If this is not possible, then it is best to return them, for a short distance at least, round the corner, and, if there is no feature or excuse there to stop them, one had better be improvised; a good many things would do, but most people fall back on a bit of carving, which at least, brings them to an honourable end.

If one considers the various ways in which the external solid angles of buildings may be treated, and tries to arrange them into groups, they fall naturally under three heads. Under the first is a single, simple, but exceedingly effective treatment. It consists merely of leaving the angle alone, that is of leaving a breadth of plain, unbroken wall on each side of the arris, of greater or less width according to circumstances. Allowing, probably, the main cornice and plinth, and perhaps some other important horizontal features, to run round, but stopping the rest of the breaks some distance from the angle. This splendidly simple treatment is especially effective if the other parts of the walls are much broken up, and particularly if the breaks consist of a long range of regular features such as an arcade, colonnade, or series of large openings. But in the plainest and simplest buildings the amount of effect one may get by merely crowding up the openings a little towards the middle of each front, so as to leave a good width of plain wall surface at the ends is hardly to be exceeded by that which may be obtained by the most elaborate means. Examples of the plain solid angle are so common—they grow and multiply so naturally if people will but let them alone, as they did in times less fussy and ambitious than the present—that we are apt to overlook its value. But one or two prominent modern instances may be pointed out; such as the new building for the Faculté de Medecin at Paris, the library of St. Genevieve at Paris, and the public library at Boston, in America. These buildings owe nearly the whole of such architectural effect as they have to the broad, solid simplicity of the angles. If, in the views of them, you cover up the greater part of the angle piers, you see that very little such effect remains; and if you break them up with pilasters or buttresses, or put niches in them, or add turrets or buttresses, you find it much easier to spoil the design than to improve it. A shield or cartouche, or some such ornament,—evidently *applied on the surface* of the wall,—adds a little interest perhaps, and is decorative without detracting from the breadth and solidity of the pier. But, in most cases at least, it would be difficult, if not impossible, to interfere with their bare simplicity without detriment to the design as a whole.

In the second group I propose to put all such treatments of angles as arise from the use of such simple features as quoins, piers, pilasters, columns, buttresses, and so on, either singly or in groups. And in the third come the more important angle features.

As regards quoins, it is not necessary to say very much. In looking up examples and preparing this paper, I have been rather surprised to find how seldom ordinary quoins have been used in important buildings, or by the best architects of Renaissance and modern times. The most prominent examples I have come across in well-known buildings, are those of a few of the Florentine palaces and of some of the London clubs, notably the Travellers' and the Reform. But in his later works, even Sir C. Barry abandoned their use. The fact is, that although quoins do emphasise and strengthen an angle in a simple and logical way, they have a tendency, which it is difficult to overcome, to dwarf a building by destroying its scale. If you think of almost any building with quoins, and imagine how it would look without them, you will understand my meaning at once. I would not be understood to condemn quoins altogether, but only to point out that there is this tendency, and that, for that reason or some other, many of the best architects have usually avoided them. They are, or pretend to be, especially big, heavy stones; they are very conspicuous,—it is one of the objects of using them to make them so; they are apt to give their own scale to the whole building; especially as they are tailed into the walls, and do not appear as a separate feature. The simplest way to counteract this tendency is, evidently, not to make the contrast between the quoins and the general wall surface too marked; in using stone quoins with brickwork, not to project them beyond the general wall-face, nor to make them very large; in using rusticated quoins with plain stonework, not to make the rustications too heavy, and only to resort to rock-facing when the rest of the wall is rusticated.

I think that in all times and countries the feature most commonly used for the purpose of marking the angles has been the obvious one of a strong pier, marked off by its projection beyond the general wall surface, or by its special treatment.

It is unnecessary, perhaps, to go back to the ancient architecture of Egypt and Assyria, though we could find illustrations there two or three thousand years old. But, of the Greek and Roman periods, the little temples, "in antis," to many people the most satisfactory of their architectural compositions, may be quoted; even in the peristylar temples, the angles of the wall behind the peristyle were generally marked by antæ, and in the Roman basilicas and tombs, the external arcades and ranges of columns or pilasters were stopped at the angles by piers. In Byzantine architecture, the only style that can be said to have existed in Europe for several centuries after the fall of the western empire, the exterior of the buildings seems to have received so little consideration that it is not surprising to find no particular attention given to the angles. But in the Romanesque, which appeared after the period of barbarism, they are again marked by piers or, as Sir G. Scott called them, "pilaster-strips," which were always wider, and usually a great deal wider, than the strips by which the rest of the walls were divided up.

The pilaster-strips, we know, became in time the shallow buttresses of the later Romanesque and Norman styles, and through them the ancestors of all the subsequent developments

of buttresses. But quoins also seem to be descended from them, and in this way: all the pilaster strips were generally,—at any rate, generally in the commoner class of work,—built up of alternate flat stones on end, which had little or no hold on the walls, and long stones laid flat and tailed well into the walls. One may see it is so by examining almost any bit of, say, Saxon architecture. But this method, when it came to be used at the angle, seems to have puzzled the simple builders of the period to some extent. I cannot exactly say how they argued the matter out, but they seem to have come to the conclusion that the best solution was to make the bonding stone tail into both walls; and thus they arrived at the peculiar, primitive form of quoins we call long and short work. Whether this form was the parent of modern quoins, or whether, as is more probable, other workmen in other places met the same difficulty by tailing every stone into the walls, first one on one side and then one on the other, I cannot say; but in either case quoins would be the lineal descendants of the pilaster-strips.

The angle strips, if they were not merely the last of a series of narrower strips forming the piers of a shallow arcade, as in the lower stages of the cathedrals at Pisa and Lucca, were connected at the top, and generally at several other points, by corbel-tables which brought the wall out flush with them, and served excellently well to tie them into the general mass; examples will occur to every one. The style was spread over nearly the whole of Western Europe, and, of course, developed in different directions in different parts. But even when the styles had wandered so far apart that their common origin is unrecognisable, as in the towers of Durham Cathedral on the one hand, and the west front of Piacenza Cathedral on the other, we still find the angle piers marked and prominent. In the northern example, however, they seem already to foreshadow turrets, while in the other they have nearly developed into the broad pilaster form, which they have already still more nearly approached in the cathedral of Genoa.

Angle piers continued to be used throughout the Middle Ages. Even after buttresses had been developed from them we find them persisting also in their original form; still, as a rule, stopped by a corbel table or cornice at the top, and generally with a buttress planted against each of their faces. Later on they projected farther and stopped the cornices; themselves running up into pinnacles at the top. They, and the buttresses planted against them, gradually became more and more elaborate, and their grouping more and more complicated, until they developed into the graceful groups that mark the angles of the great church towers of the Late Gothic period. To analyse these groups would be an impossible task, and, probably, not a very profitable one; for the treatment is different in every case. All have a central pier, the pinnacle of which overtops the rest and dominates the composition, and against the two faces of it are planted buttresses. But how those buttresses are treated is a matter of taste. Except as regards the dominating pinnacle, the buttresses have become the chief thing in the group, and, as a matter of fact, the pier frequently exists only in imagination or for part of the height. Its pinnacle is left, and the buttresses are placed, not at the angle of the wall, but at what would be the middle of the face of the pier: but the pier has no projection, and is not to be distinguished from the wall face. One sometimes sees groups of angle buttresses and pinnacles without the central pinnacle, but I do not remember any such groups which appeared to be quite a success; the effect, too, is usually made worse in such cases by the buttresses being placed close up to the angle.*

The New Houses of Parliament in Stockholm.—In all about 150 designs were received for the new Houses of Parliament and the National Bank to be built in Stockholm, of which fourteen have been retained for final examination. As soon as the jury has awarded the three prizes offered for the best designs all of them will be publicly exhibited.

The School Board for London and the Building Trade.—The report of the adjourned discussion on builders' grievances at the School Board is unavoidably crowded out this week.

* The remainder of the paper, with some notes of the discussion, in our next.

THE LONDON COUNTY COUNCIL.

THE London County Council held its last meeting during its first (official) year of existence on Tuesday afternoon, in the Council Chamber, Guildhall, Lord Rosebery in the chair.

The Tenders for Works at Cane Hill Asylum.—The Asylums Committee brought up the following report, dated October 29:—

"Your Committee have to report that in pursuance of the resolution of the Council of the 22nd inst.,* they have reconsidered their recommendation to the Council to accept the tender of Messrs. Brass & Son for the execution of the works for the extension of the County Asylum for pauper lunatics at Cane-hill, Coulsdon. The further consideration of the subject has induced your Committee not to recommend the acceptance of Messrs. Brass & Son's tender, and inquiries are now being made as to the capacity of some of the other firms who tendered for the work. When the report as to these inquiries has been considered, your Committee will probably make a further recommendation as to the acceptance of one of the tenders, a list of which† was submitted to the Council on October 15."

This report was adopted unanimously and without discussion, on the motion of the Chairman of the Committee, Mr. P. M. Martineau.‡

Gates and Bars.—The Parliamentary Committee brought up a report of which the following formed the first paragraph:—

"On July 23 last, the Council referred it to your Committee to take steps for the removal of the bars situate in Torrington-place, Gordon-street, Upper Woburn-place, and Regent-place. Your Committee have accordingly prepared a Bill for this purpose, which omits all reference to the Lands Clauses Consolidation Act, 1845, and does not include any provision for compensation. The Bill also empowers the Council, in default of agreement, to give notice to the owner to remove the gate or other obstruction to which the notice relates within a stated time, such time not to be less than three months after the date of the notice, and failing compliance, the Council may take steps to remove the obstruction. The Bill also declares that, when the obstruction has been removed, the thoroughfare shall thereafter remain open and uninterrupted. Your Committee recommend—

'That the draft Bill as to Bars and Gates, now submitted, be approved, and that the necessary steps be taken for its introduction into Parliament as a private Bill.'"

These recommendations were agreed to.

The Strand Improvement.—The second paragraph of the Parliamentary Committee's report was as follows:—"Your Committee have considered the resolution of the Council of the 29th ultimo, authorising them to include in the application to Parliament for powers to remove the south side of Holywell-street, Strand, powers to acquire the land and buildings on the north frontage to Holywell-street, sufficient land and buildings on the north side of St. Mary-le-Strand Church, and a portion of the enclosure at the west end of the said church, so as to form a practicable roadway with frontage thereto.§ Your Committee have accordingly given the necessary instructions for the preparation of plans, estimates, books of reference, and Parliamentary notices, and have directed the solicitor to include the acquisition of the property in the Bill. In connexion with the subject your Committee have directed their attention to the terms in which the clauses relating to compensation, and the provisions (if any) affecting 'betterment,' ought to be framed in the draft Bill; and, being unanimously of opinion 'that it is just and expedient that the owners of adjacent property, the value of which is increased by improvements, should contribute to the expense of those improvements,' they have (*a*) instructed the Solicitor to include in the Parliamentary notices of the Bill provision that owners of property within the Strand District, or such part of it as may be defined in the Bill, not purchased by the Council, but likely to be improved by the operations of the scheme, shall be required to contribute towards the expense of the improvement in proportion to the enhanced value of their property, due to the improvement. (*b*) Your Committee have also given instructions to the Solicitor and the Parliamentary Agent to embody in the notices a clause to the effect that the provisions of the Lands Clauses Consolidation Acts shall be varied in the Bill for carrying out this improvement, as regards the principle on which compensation shall be assessed in the case of properties to be taken by the Council, and enacting that no compensation shall be paid for compulsory purchase, and that the amount shall be agreed at a fair value, having regard to all the circumstances. Your Committee have issued to the Council a copy of the proposed clause as regards compensation, and your Committee recommend:—

'That the course taken by them, as above set out under headings *a* and *b* respectively, be approved.'"

Considerable discussion arose on these recommendations, Major Probyn moving an amendment (which was seconded by Colonel Rotton and supported by Colonel Hughes, M.P., Mr. Boulnois, M.P., and others), to the effect that the report be referred back for further consideration. In support of the amendment it was urged that the seeking of powers to obtain partial recoupment from the owners of property in the way specified would jeopardise the carrying of the Bill through Parliament, and would delay the execution of the improvement. On behalf of the Committee, it was replied that Parliament must take the responsibility of rejecting the Bill if it so chose. Eventually, the amendment was lost, on a division, by 69 votes against to 30 votes for, and the recommendations of the Committee were agreed to.

The Housing of the Working Classes.—Earl Compton, the Chairman of the Committee on the Housing of the Working Classes, brought up a long report containing some important recommendations* as to suggested amendments in the law relating to artisans' and labourers' dwellings. The report was approved by the Council, and it was referred back to the Committee, with authority to make representations to the Secretary of State for the Home Department, with a view of ascertaining whether the Government will take steps to procure the amendment of the law referred to.

Thanks to the Chairman and Vice-Chairman.—On the motion of Mr. Boulnois, M.P., seconded by Mr. James Beal, a vote of thanks was accorded to Lord Rosebery for his great services as Chairman of the Council; and a similar compliment was paid to Sir John Lubbock, M.P., the Vice-Chairman, on the motion of Mr. Strong, seconded by Mr. Antrobus. The proceedings then terminated.

* See *Builder* for October 26, p. 294.
† See *Builder* for Oct. 19, p. 285, and for Oct. 26, p. 294.
‡ Since this report was in type, and just as we go to press, Messrs. Brass & Son send us a newspaper cutting containing copy of a letter which they addressed to the Chairman of the Asylums Committee on the 24th ult., as well as a copy of a letter which they have received from the Office of Works. The first letter denies the accuracy of some statements made at the meeting of the County Council on the 22nd ult., and the denial is supported by the letter from the Office of Works. If Messrs. Brass had sent the correspondence to us in the first instance, instead of to a morning paper (from which they send us a cutting at the last moment) we would have endeavoured to make room for it.
§ See *Builder* for Nov. 2, p. 314.

ARCHITECTURAL SOCIETIES.

Royal Institute of the Architects of Ireland.—A Council meeting of this Institute was held at 37, Dawson-street, Dublin, on Monday, the 4th inst. Mr. Thomas T. Drew, R.H.A., was in the chair. Other Fellows present were:—Mr. W. M. Mitchell and Mr. Albert E. Murray, hon. sec. The hon. secretary read the minutes, which were signed. After the general business was completed, the question of the preliminary examination was taken up, when it was decided that this examination should be held at the same time as that of the R.I.B.A. Examination next week, and that the examining board should be as agreed on, viz., Messrs. Thos. Drew, J. R. Carroll, R. Millar, and Albert E. Murray, hon. sec. Candidates for membership were passed for ballot. A special Council meeting was directed to be summoned to nominate the officers for election for 1890, to consist of President, Hon. Sec., Treasurer, Members of Council, and Auditors.

The Architectural Association.—The second meeting of this Association for the present session was held on the 1st inst., in the meeting-room of the Royal Institute of British Architects, Mr. Leonard Stokes (President) in the chair. The following sixty-four new members were elected:—

Messrs. B. D. Cancellor, C. J. J. McCormick, F. A. C. Smith, J. A. Cooke, E. H. Ward, J. P.

* We have not space for these, but may return to the subject.

Clark, S. B. Lee, G. H. M. Trew, A. N. Wilson, A. E. Gamble, C. H. Aveline, A. E. House, E. J. Kerr, T. J. Mackness, H. D. Austin, W. C. Hulbert, E. A. White, W. B. Hopkins, H. W. Johnson, C. B. Howell, G. M. Nicholson, H. C. Lauder, J. Soutter, P. G. Newell, D. Dinwiddy, L. S. Rogers, J. Mew, K. Sakwrai, B. W. Austin, A. R. Read, L. E. G. Collins, A. J. Meacher, G. R. Morriss, W. G. Perstius, A. E. Pett, W. E. Pitt, W. E. Davis, H. J. Cox, F. H. Price, E. F. Selby, J. W. Paul, J. A. Page, C. R. R. Clark, V. H. King, G. P. Allen, F. K. Kendall, A. S. King, W. P. Crosby, H. Tinker, T. G. Charlton, J. W. Acock, A. B. Thomas, C. E. Salmon, R. H. Davies, A. G. Wright, W. C. Waymouth, W. Kerr, C. W. Dawson, W. Weir, F. P. Theobalds, A. Easton, F. E. Halford, H. B. Tabberer, B.A., and C. C. Dornbusch.

Fifteen gentlemen were nominated for election as members. Mr. F. T. Baggallay then read a paper entitled "The Treatment of Angles and Enclosing Lines," the first portion of which we print on another page.

Sheffield Society of Architects and Surveyors.—The inaugural meeting of the new session of the Sheffield Society of Architects and Surveyors was held at the Montgomery Hall on the 28th ult. There was a good attendance of members, including Mr. F. Fowler (the President), Messrs. T. J. Flockton, C. Hadfield, E. M. Gibbs, C. J. Innocent (Vice-President), W. H. Lancashire, C. F. Wyke (Borough Surveyor), A. F. Watson, T. Winder, W. C. Fenton, and others. The President delivered his opening address. After a graceful allusion to the manner in which his predecessor, Mr. Flockton, had discharged his duties, he expressed an opinion that much good was being done by societies such as theirs, which were, he was glad to note, on the increase. The Royal Institute of British Architects and the Surveyors' Institution had fostered the movement, and both were doing their best to raise the professional status of their members, and to promote the higher education of young men entering into the professions of architect and surveyor. The Sheffield Society was doing a good work in alliance with the Royal Institute by carrying out the Examination scheme. In these days it was absolutely necessary that professional men should be well acquainted with their business, and much might be done in this direction by the preparation, reading, and discussion of papers by the members on subjects of professional interest. Speaking from the surveyor's standpoint, he would indicate a few, such as the valuation of town or agricultural property, rights of light, town improvements, valuation of manufacturing premises for rating and other purposes, drainage and sanitary work, &c. He instanced the valuation of property in Sheffield after the inundation in 1864, as showing that at any time the young surveyor should be ready for emergencies. Such often arose in actual work, and the best preparation for a successful career was the accumulation in early practice of knowledge and experience for the hour of need.—On the motion of Mr. C. J. Innocent, seconded by Mr. C. Hadfield, a hearty vote of thanks was awarded to Mr. Fowler for his address.—The Secretary then read a letter from the Royal Institute of British Architects, announcing that the following gentlemen (whose drawings and educational certificates had been considered by the Committee of the Sheffield Society, charged with the conduct of the Local Preliminary Examination) would be at once registered as probationers of the Royal Institute of British Architects, viz.:—Walter Patrick Belk, Charles Matthew Ellison Hadfield, Albert Ernest Hall, Charles Frederick Innocent, Harry Teather, John Charles Teather, James Vincent Woofinden. The president's brother (Sir John Fowler) kindly sent for inspection at the meeting a photographic album, containing views of the construction of the Forth Bridge, to the close of September last.

ENGINEERING SOCIETIES.

The Institution of Civil Engineers—The opening meeting of this Institution for Session 1889-90 will be held on Tuesday evening next, the 12th inst., when the President, Sir John Coode, K.C.M.G., will deliver his inaugural address. On this occasion, also, the medals, premiums, and prizes awarded at the end of last session will be presented. The first Students' meeting for the new session will be held on Friday next, the 15th inst., when Mr. S. C. Bailey will read a paper on "The New Harbour and Breakwater at Boulogne-sur-Mer." From the "List of Members" of the Institution issued on the 1st inst., we notice that the total membership is 5,732, made up of 19 Honorary Members, 1,659 Members, 2,643 Associate-Members, 444 Associates, and 967 Students.

The Society of Engineers.—At a meeting of the Society of Engineers, held at the Town-hall, Westminster, on Monday evening last, Mr. Jonathan R. Baillie, President, in the chair, a paper was read by Mr. S. Griffin on "Modern Gas Engine Practice." In dealing with the subject, the author confined himself principally to illustrations from actual practice, these being discussed as far as possible in the order in which the various improvements have been introduced. Having briefly alluded to a number of important points which could not be dealt with, by reason of the limited time at his command, the author concluded by indicating a few of the directions in which development of the gas-engine may be expected to extend, giving it as his opinion that future gas-engines will be constructed upon the lines of those of the present day, improvement being in the direction of detail rather than principle.

LOW SIDE WINDOWS.

SIR,—The argument of Colonel Parry [see his letter in the *Builder*, p. 316, *ante*] seems to me illogical and inconsequential. It amounts simply to this, that because there are apertures in the west walls of churches in Northern Italy, therefore the low side windows in English chancels were not for the use of lepers. I do not see any connexion or relationship whatever between the Italian and English features referred to. It appears to me a plain matter of fact that the English openings are lepers' windows. They are almost exclusively of the Early English period, 1150 to 1250, and mark the return of the "Saunterers" (Saint-Terre) from the Holy Land bearing the hideous disease, which rapidly spread. The unfortunate sufferers—homeless wanderers—were not allowed to enter houses or places of general resort. The clergy, not willing to deprive them entirely of the offices of religion, devised a means—the low side chancel window—by which the Sacrament of the Lord's Supper could be administered to these objects, confession and absolution, no doubt, preceding at the same place. These apertures were small, as only one person at a time had to be dealt with. They were in the chancel, as only there was the Sacrament administered. They were at the side, as being, for many reasons, the most convenient place, and they were low because the persons outside were kneeling. This is the simple explanation of these windows—most natural and quite agreeable to common sense. The apertures—they are scarcely windows—were closed with shutters when not required for their special purpose. They did not look towards the high altar or any other. PHILIP E. MASEY.

"A QUESTION OF FEES."

"HAYWOOD *v.* SANDON."

SIR,—In reply to a letter in your issue of Oct. 26, p. 299, signed "F. H. C.," if he will kindly refer to 20 & 21 Vic., c. 43, sec. 2, he will be able to satisfy himself as to the right of appeal in this case. He may also refer to the case of "Wigmore *v.* Power," Law Reports 7, Common Pleas, p. 386.

W. SECKHAM WITHERINGTON.

STAINED GLASS.

Aberavon (*Port Talbot*).—A five-light painted glass window has just been placed in the east end of Aberavon Church. The window has been carried out by Mr. Dixon, of London, under the direction of Messrs. Kempson & Fowler, of Llandaff, the subject being "The Adoration of the Magi."

Carmarthen.—The very ancient parish church of Mydrim, the chancel of which has been restored at the cost of the Ecclesiastical Commissioners, has been further decorated by the filling of the east window with stained glass with a representation of the Last Supper. The window, which was lately unveiled by the Bishop of St. David's, is in memory of the Reverends Rhys Thomas Jenkins and John Jenkins, both of whom have been connected with the Church for over forty years. The artists were Messrs. Chas. Evans & Co., London.

Ruislip.—A five-light window, by Mayer & Co., has just been erected in the parish church, Ruislip, near Pinner, by Sir Hugh Hume Campbell, in memory of Lady Hume Campbell.

Shedfield.—The Church of St. John, at Shedfield, has just received a three-light window. The subject selected for treatment is the Home at Bethany, and illustrates the text, "The Master is come, and calleth for thee." The work was entrusted to Messrs. Mayer & Co.

PROVINCIAL NEWS.

Herne Bay (*Kent*).—Two sheltered seats have lately been erected on East Cliff, Herne Bay, by Mr. A. S. Ingleton, builder, of Herne Bay, at a cost of 100*l.* each. Mr. John R. Withers was the architect, whose design was selected from amongst eighteen submitted in an open competition advertised in the *Builder* in May last. The Local Board are about to erect a band-tand from a design by the same architect.

Whalley.—The new vicarage at Whalley, Lancashire, has been carried out and completed under the direction of Mr. Henry Ross, of Accrington, on a plot of land which has been added to the old vicarage site. The fragments from the Abbey buildings discovered when pulling down the old vicarage, consisting mostly of portions of window tracery, have been carefully preserved. The only feature about the old house which was thought worth retaining, viz., the oak staircase, has been re-fixed in the new building. The stone in the old walls has been re-used to a great extent. This fact is recorded on the date stone inserted on the south side, and which reads thus: "Ex antiqua nova domus." The work has been carried out by local contractors.

The Student's Column.

WATER-SUPPLY.—XIX.

LONDON WATER-SUPPLY (*continued*).

Wells.

THE consideration of the public water-supply of the metropolis, however interesting and instructive it may be to the student, has not the same immediate practical value to the average architect or engineer, as the study of privately supplying small establishments, such as breweries, distilleries, mansions, hotels, &c., with the precious fluid. In the metropolitan area this is invariably accomplished by sinking wells, or bore-holes, to certain water-bearing levels, and it will be of interest to describe some of these "well-sections," to get some idea of the relative depths in different parts of the area of the water-bearing strata; to arrive at the nature of the materials which may be met with, and the difficulties usually encountered in constructing the wells and obtaining the supplies of water.

The best way, [perhaps, of commencing the subject will be to briefly describe the geology of the London basin, with especial reference to that portion of it nearest to and in the metropolis itself. The term "London basin" is often a stumbling-block to the non-geological student of water-supply; he not unnaturally concludes that it is a very circumscribed area, with London in the centre of a sort of depression of the ground, and with this idea permeating his mind he is unable to appreciate the actual structure of the London district, or to derive much useful information respecting it from occasional professional papers on metropolitan hydrogeological matters which may come under his notice. The "London basin" properly so called is, roughly speaking, a triangular patch of clays, sands, and gravels, lying on the chalk, and the edges of which extend in a westerly direction from Pegwell Bay (near Ramsgate), through Rochester, Croydon, Basingstoke, to Hungerford; thence north-eastwards through Reading, Windsor, Watford, by Hertford and Woodbridge to the eastern part of Norfolk by Great Yarmouth. The estuary of the Thames occupies the site of a large portion of the beds which have been denuded by that river and by the sea on the eastern boundary of the basin in Essex, Suffolk and Norfolk. The chalk fringing the edges of these deposits usually (especially on the southern and western portions of the area) forms high ground and has a general tendency to dip under them towards the centre of the basin. Locally there are exceptions to this rule, but at all events one of the maximum effects is to create a sloping, slight trough-like flat depression (not very apparent when drawn to scale) under the district on which London stands. Rain falling on the chalk hills is absorbed and conducted underground, and collecting in this depression would completely saturate the chalk were the water not so extensively drawn upon in places. The

impervious mantle of clays forming the London basin naturally prevents the escape of water from the chalk, and it will be readily understood that, immediately this mantle is, anywhere in the Metropolitan district, pierced through, well into the chalk, the water in the latter being, as it were, tapped, escapes up through the boring, and forms an artesian well. We have previously alluded to the depth of the water-level under London. Thus, the most persistent fundamental rock under the district is chalk, which can be met with anywhere in it by boring to a sufficient depth.

Certain deposits, however, are found fringing the chalk at its outcrop, and which are also found beneath that rock in many well-borings under London, and these possess peculiar value in regard to the question of water-supply from deeply-seated rocks. In this connexion the following table of the thicknesses of strata met with in some of the deepest well-borings in the London basin may be useful:—

Table 1.—*Deep well- and trial-borings.**

Formations passed through.	Streatham Common.	Richmond Waterworks.	Kentish Town.	Tottenham Court-road.	Cheshunt.	Ware.	Crossness, near Erith.	Chatham Dockyard.	Harwich.
Made ground, Drift, &c.	10	10	...	22(?)	35(?)	14	39	17(?)	25
London clay	153	160	236	64	30	...	...	...	23(?)
Lower London Tertiaries	78½	83½	88½	72½	50	...	98	10(?)	30(?)
Chalk	623	671	645	655½	670(?)	544	696(?)	682	890
Upper greensand	28½	16	13½	28	31(?)	77(?)		...	?
Gault	188½	201½	130½	160	164(?)	160	175	193	61
Lower greensand	...	10(?)	...	?	...	1½	...	41	...
Jurassic	38½	87½	...	64	...	...	...	22	...
? Trias	several feet	207	188½(?)	...	...	...	52	...	...
Carboniferous	...	...	...	...	...	...	...	...	69
Devonian	...	...	...	80	30	...	...	...	...
Wenlock beds	...	...	...	...	...	35	...	...	...
Total depths (in feet)	1,120+	1,446½	1,302	1,146(?)	1,010	831½	1,060	965	1,098

* The information contained in this and the following Table is largely derived from the many writings of Mr. W. Whitaker, F.R.S.

The boring at Streatham Common was made for the Southwark and Vauxhall Water Company, the top of the orifice being about 110 ft. above Ordnance datum; that at Richmond Waterworks is 17 ft. above O.D.; that at Kentish Town Waterworks is 174 ft. above Thames high-water mark; that at Tottenham Court-road, at Messrs. Meux & Company's Brewery, is about 85 ft. above O.D.; those at Cheshunt (Turnford) and Ware were constructed for the New River Company; that at Crossness, near Erith, for the late Metropolitan Board of Works, is about 6 ft. above O.D.; the Chatham Dockyard Extension well being about 10 ft. above O.D.; and that at Harwich (by the harbour, just west of the Great Eastern Hotel) is 6 ft. above high-water mark. These particulars are given to localise the position of the different wells, as near as may be,—a matter too often neglected. A well, for instance, constructed at the top of a hill, or on rising ground, may give a totally different thickness for its uppermost beds to one constructed at its foot, or in a bottom, and this even in the same street or road. And this reminds us that in many instances, as in a large city like London, it would be very useful to state the difference in level between the top of the well and the level of the street hard by, the chief reason why will be apparent in the sequel. These particulars are seldom published, with the result that much greater trouble is entailed in working out the thickness of made-ground, drift, &c., than would otherwise be the case.

It is noteworthy that the thickness of chalk passed through in the Streatham boring is less than in any of the deep borings in and near London. In all cases where the "Lower London Tertiaries" cover the chalk, the total thickness of the latter formation is present; but where this is not the case, as in the Ware boring above alluded to, the thickness of the chalk depends on the amount of the rock denuded, and the position of the top of the well with reference to the depth of the denudation. This, of course, only affects wells bored in the chalk at its outcrop; under London, as we have before stated, the chalk is everywhere covered by the clays and sands forming the normal deposits of the "London basin." These latter beds are represented in the above table as "Lower London Tertiaries" and "London Clay."

Before attempting to describe the nature of the deposits met with in these deep borings, it is necessary to point out that for brevity we have classed together many minor deposits, having distinctive names, under the term "Lower London Tertiaries," and bearing in mind the fact that the vast majority of London wells only reach the chalk, and that therefore this formation and the beds above it (which are exceedingly troublesome in many ways to bore through) claim the most general interest, we may now give further details of other and shallower borings:—

Table 2.—*Wells in the London District.*

Formations passed through.	1. Bank of England.	2. Bow.	3. Camden.	4. Cricklewood.	5. Hackney-rd.	6. Hampstead-road.	7. Hyde-park corner.	8. Kensington.	9. Pimlico.	10. Lambeth.	11. Woolwich.
Made ground, &c.	22	2	18	13	7	6	3	18	32	—	1½
Drift gravel, &c.	4	17			7	17	2¼	22		28	6¼
London clay	111	48	144	212	48½	59	229	198	140	80½	—
Woolwich & Reading series	58½	56	64	45	48	39½	64	54	67½	35½	—
Thanet series	39	51	8	21	42	24¼	21	25	31½	47	46¾
In chalk	100	150	166	19	259	37*	18	84	127	20(?)	311½
Total depths (in feet)	334½	324	400	310	411½	183	337¼	401	398	211	366

* There is some doubt as to whether the depth in the chalk in this boring should not be 92 ft.

The following gives particulars of the sites of the wells in Table 2, and (where known) the heights of the tops of the orifices above Ordnance datum, or Trinity high-water mark, with year of boring:—

1. *Bank of England.*—27 ft., T.H.W.M. 1851.
2. *Bow.*—Messrs. Berger & Company's Starch Works. 1864.
3. *Camden.*—London & North-Western Railway Station. About 100 ft., O.D.
4. *Cricklewood*, near Hampstead. — 157 ft., T.H.W.M.
5. *Hackney-road.*—Wiltshire Brewery. 1871.
6. *Hampstead-road.*—Old reservoir near the Euston-road. 77 ft., T.H.W.M. 1838.
7. *Hyde Park-corner.*—St. George's Hospital. About 50 ft., O.D. 1870.
8. *Kensington.*—Horticultural Society. About 60 ft., O.D. 1862.
9. *Pimlico.*—Watney's Stag Brewery, Brewer-street. A little below T.H.W.M.
10. *Lambeth.*—Bethlehem Hospital.
11. *Woolwich.*—Western edge of Government Arsenal (? at the Laboratory). 20 ft., O.D.

In Table 2 it will be observed that the thickness of the London clay is very variable. This is not difficult to account for, when we reflect that the drift beds above it do not follow on in regular sequence in the geological scale. They lie on the London clay unconformably, and this proves (even if there were no other evidence) that that formation had undergone much denudation, its thickness having been therefore reduced before the deposition of the merely superficial beds above it. As we shall presently see, it is not very difficult to arrive at the comparative amount of this denudation for any given locality in the London area. When the London clay is covered by sands, known as the Bagshot beds, its total thickness is shown by the well-borings. It is often very difficult to define the limits (in well-borings) between the London clay and the Woolwich and Reading series; and, again, between these latter and the Thanet series. Some geologists include a series of pebble beds and sands between the two former formations (or made out of them?) as a separate formation, and call it the Oldhaven and Blackheath series. These are not always easy to recognise (even when present) underground. It is not so difficult to draw the lines between any of these formations where they crop out at the surface, but from the peculiar methods sometimes adopted in boring, carelessness on the part of workmen, the somewhat altered appearance of the individual beds at much depth, and from the known variability in their lithological character, the depths, relative thicknesses, and classification of beds in the well-sections are occasionally somewhat doubtful, but only to the extent of a few feet.

RECENT SALES OF PROPERTY:

ESTATE EXCHANGE REPORT.

Oct. 28.—By George Jackson.

Herts, near Standon Station—"High Trees Farm," 304a. 1r. 12p., r. £340 p.a. £3,550

By G. H. Tatham.

West Chislehurst—A plot of l. land 650

By H. Hooper.

Fulham—73, Harwood-rd., u.t. 67 yrs., g.r. £4. 1½s. 375

By Fleurent & Sons.

Crouch End—L.g.r. of £10, u.t. 25 yrs. 105
65 to 75 (odd), Park-rd., u.t. 25 yrs., g.r. £35..... 935

Oct. 29.—By W. B. Hallett.

City—190, Upper Thames-st., u.t. 64 yrs., g.r. £90, e.r. £360 1,650

By Jones, Lang, & Co.

West Ham—F.g.r. of £9, with reversion in 61 yrs. to £80 p.a. 220

Fulham—F.g.r. of £22. 10s., with reversion in 89 yrs. to £83. 4s. p.a. 510

By T. N. Turner.

Marylebone—27, North-st., u.t. 32 yrs., g.r. £15 ... 220

Kilburn—6, 7, and 8, Alpha-pl. West, u.t. 68 yrs., g.r. £9, r. £85. 16s. 310

6 and 7, Park Mews, u.t. 77 yrs., g.r. £10, r. £55 200

104, Kilburn Park-rd., u.t. 77 yrs., g.r. £8, r. £50 310

L.g.r. of £105, u.t. 77 yrs., g.r. £35 p.a. 1,400

118, Kilburn Park-rd., u.t. 77 yrs., g.r. £8, r. £45 p.a. 410

St. John's Wood—163 and 169, Belsize-rd., u.t. 66 yrs., g.r. £16. 10s. 900

By A. Robertson.

Kensington—9 and 11, Bancroft-st., subject to lives aged 61 and 63 years, g.r. £3. 150

Old Kent-rd.—Nos. 200 and 202, the lease of, u.t. 14 yrs., r. £120 40

By Rutley, Son, & Vine.

Caledonian-rd.—50, Storey-st., u.t. 55 yrs., g.r. £8 225

King's Cross—46, Sidney-st., u.t. 52 yrs., g.r. £4, r. £34 235

By Wilkinson, Son, & Welch. (At Brighton.)

Brighton—17, New Steine, and 79 and 81, St. James's-st., f. 1,800

By Inman & Co.

Maida Vale—20, Greville-pl., f., r. £95 p.a. 810

Oct. 30.—By R. Tedby & Co.

Kingsland—63, Mortimer-rd., u.t. 27 yrs., g.r. £4 205

Islington—51, Popham-rd., u.t. 21 yrs., g.r. £5, r. £30 p.a. 85

By R. A. Nourry.

King's Cross—108 and 109, Caledonian-rd., u.t. 54 yrs., g.r. £4. 9s., r. £37 1,040

8, Southern-st., u.t. 54 yrs., g.r. £1. 1s., r. £22... 200

West Hampstead—16, Woodchurch-rd., f. 3,100

By Reynolds & Eason.

Bethnal Green—115 and 117, Green-st., f., r. £100	£1,900
119 and 121, Green-st., f.	3,030
22 and 23, North-pl., f., r. £31 p.a.	330
Tottenham—1, Northampton-ter., f., r. £45 p.a.	765
Chingford—A Moiety of the "Tile House Estate," about 6 acres, f.	550
East India Dock-rd.—15 to 21, Sophia-st., f., o.r. £140	885

By Norton, Trist, & Gilbert.

Edgware-rd.—20, Cambridge-ter., u.t. 40 yrs., g.r. £17, r. £135 p.a.	1,350
Kensington—26, Emperor's-gate, f.	1,500
Dulwich—11, Ildersley-gr., u.t. 87 yrs., g.r. £8, r. £40 p.a.	240
Fulham—5 and 6, Delaford-st., u.t. 90 yrs., g.r. £10. 10s., r. £66	270

Oct. 30 & 31.—By Debenham, Tewson, & Co.

Ozen, near Bledlow—The Upper and Lower Farms, containing 529 acres, f., r. £610 p.a.	13,350
9 f. cottages in Chinnor	890
Numerous houses and cottages, f.	2,962
An allotment field, 37a. 2r. 10p., r. £134 p.a.	1,610
"Henton Farm," containing 88a. 3r. 32p., f., r. £160 p.a.	3,150
Stokenchurch—"Cooper's Court Farm," part of, 124a. 2r. 6p., f., r. £115	2,650
"Cooper's Court Farm," part of, 20a. 2r. 13p., f., r. £15	640
F. farm, 18a. 1r. 2p., r. £10	400
"Eastwood Farm," 86a. 0r. 16p., f., r. £100	1,850
"Hill Corner Farm," 30a. 2r. 27p., f., r. £56	700
"Dean's Farm," 35a. 0r. 11p., r. £60	1,400
"Saddler's Farm," 21a. 3r. 8p., c., r. £20	590
Eight f. and c. cottages	495
Dorchester—"The Manor Farm," 53a. 0r. 27p., f.	2,100
Aston Rowant—Three f. cottages	170

Oct. 31.—By R. W. Scobell.

Surbiton—The residence "Everest," u.t. 89 yrs., g.r. £16. 10s., r. £100	1,145

By Waterer & Sons.

Chertsey—Freehold land, 29a. 0r. 29p.	4,350
A plot of meadow land, 1a. 1r. 17p., f.	300

By Harman Bros.

Sydenham—5 to 8, Denmark-ter., u.t. 90 yrs., g.r. £21, r. £72. 16s. p.a.	270
Finchley—9 to 13 (odd), William-st., u.t. 88 yrs., g.r. £14. 10s., r. £72. 16s.	345

By C. D. Field & Son.

Bermondsey—18 & 19, White's Ground, f., r. £320	5,000
81, Grange-rd., f., r. £48	640
Peckham—L.g.r., £22. 10s. p.a., u.t. 74 yrs.	400
Nutt-st.—L.g.r., £3 p.a., u.t. 74 yrs.	55
Scipio-st., l.g.r. of £8. 10s., u.t. 74 yrs.	140

By Blake & Dannatt.

Brockley—F.g.r. of £13, with reversion in 87 yrs.	300
F.g.r. of £23, with reversion in 88 yrs.	545
F.g.r. of £10, with reversion in 87 yrs.	245
F.g.r. of £40, with reversion in 90 yrs.	955
F.g.r. of £41, with reversion in 91 yrs.	980
East Dulwich—F.g.r. of £45. 10s., with reversion in 89 yrs.	955

By E. Stimson.

High Holborn—6, Fulwood's Rents, f.	1,050
Shadwell—Stabling in Sun Tavern Yard, u.t. 33 yrs., g.r. £8	300
Waterloo-rd—2 and 4, Gray-st., and 13, Barron's pl., u.t. 14½ yrs., g.r. £30, r. £134	130
26, Oakley-st., and 9, Coral-st., u.t. 21 yrs., g.r. £9	320

By Brodie, Timbs, & Baker.

Old Windsor—Rent charges, £34. 16s. 11d. p.a.	500
Crouch-hill—31, Trinder-rd., u.t. 85 yrs., g.r. £6. 10s., r. £36	385

By Newbon & Harding.

West Smithfield—77 and 78, Long-lane, f., r. £150 p.a.	3,470
St. Luke's—6 and 8, Gee-st., and 2 and 3, Willow-row, f., r. £40 p.a.	780
28 and 29, Gee-st., and 13 and 14, Willow-row, f., r. £107. 18s. p.a.	885
Kentish-town—46, Clarence-rd., u.t. 49 yrs., g.r. £5. 5s., r. £37 p.a.	375
Holloway—112, Lady Margaret-rd., u.t. 79 yrs. g.r. £6. 15s., o.r. £50 p.a.	580
Highbury—15, Highbury-pl., f., o.r. £120 p.a.	2,125
Hoxton—28, New North-rd., u.t. 46 yrs., g.r. £7. 10s. r. £52 p.a.	580
Stoke Newington—81 and 85, Hawksley-rd., u.t. 84 yrs., g.r. £13, r. £71. 2s. p.a.	465
6, Grove-rd., u.t. 68 yrs., g.r. £6, r. £38 p.a.	255
149, Nevill-rd., u.t. 75 yrs., g.r. £4. 10s., r. £26 p.a.	200
Dalston—67, Eleanor-rd., u.t. 56 yrs., g.r. £3. 5s., r. £28 p.a.	245

Nov. 1.—By J. Wilson.

Paddington—9, 17, and 21, St. Mary's-rd., f., o.r. £205	2,320

[*Contractions used in this list.*—F.g.r. for freehold ground-rent; l.g.r. for leasehold ground-rent; i.g.r. for improved ground-rent; g.r. for ground-rent; r. for rent; f. for freehold; c. for copyhold; l. for leasehold; o.r. for estimated rental; u.t. for unexpired term; p.a. for per annum; yrs. for years; st. for street; rd. for road; sq. for square; pl. for place; ter. for terrace; yd. for yard, &c.]

MEETINGS.

Saturday, November 9.

Liverpool Architectural Society.—Visit to the new Infirmary (by permission of Mr. Waterhouse, R.A.). 2 p.m.

Monday, November 11.

Surveyors' Institution.—Address by the President, Mr. E. P. Squarey. 8 p.m.

Bradford Historical and Antiquarian Society.—8 p.m.

Tuesday, November 12.

Institution of Civil Engineers.—Inaugural address by the President (Sir John Coode), and presentation of Medals, Premiums, and Prizes awarded at the end of last session. 8 p.m.

University College, London.—Mr. Hugh Stannus on "The Distribution and Application of Ornament with Reference to Surface, Material, Construction, and Purpose." V. 5 p.m.

Wednesday, November 13.

University College, London (Archæology).—Professor R. S. Poole on "The Mosque." 5 p.m.

Liverpool Engineering Society.—Mr. G. Farren on "The Stability of Earthwork and Masonry Dams." 8 p.m.

Thursday, November 14.

Institution of Electrical Engineers.—Mr. K. L. Murray on "The Lighting of the Melbourne Centennial International Exhibition." 8 p.m.

Friday, November 15.

Architectural Association.—Mr. Banister F. Fletcher on "The Paris Exhibition." 7.30 p.m.

Institution of Civil Engineers (Students' Meeting).—Mr. S. C. Bailey on "The New Harbour and Breakwater at Boulogne-sur-Mer." 7.30 p.m.

Miscellanea.

New Bridge over the Cam.—The foundation stone of the new roadway bridge over the River Cam, with approaches at Chesterton, Cambridge, was laid on Monday last by the Mayor of Cambridge (F. C. Wace, Esq., M.A.) and Mr. John Bester (Chairman of the Local Board of Chesterton). The superstructure is constructed of iron and steel, and consists principally of six elliptical main ribs. The main ribs are 100 ft. clear span, with a clear rise above the water-line at the centre of 14 ft. 6 in.; this span allows the maximum width of the river at this point, with a haling way on the Cambridge side of 12 ft. in width. The main ribs are built up of wrought iron plates and angle iron, and firmly braced together with diagonal and horizontal cross bracing of channel iron; the ribs are connected at the top with steel corrugated flooring plates, and upon these plates is laid the concrete and macadam road. The extreme width of the bridge above, between the parapets, is 40 ft.; this gives two footways of 7 ft. wide each, leaving a roadway of 26 ft. wide. The two outer ribs are covered with ornamental cast-iron spandrels, surmounted by ornamental cornice and parapet. It is claimed that the form of rib, as designed, offers the least resistance to the flood waters, and gives greater treadway for the haling-way than the segmental arch. The foundations of the bridge differ on each side. On the Chesterton side good solid clay is found at a depth of 15 ft. On the Cambridge side the bed of the old river was found, and as the clay was not reached until about 30 ft. below the top ground level, the engineers had to pile the substrata to obtain a good foundation for the abutments, in preference to excavating down to the solid. The abutments and retaining wall are built of Darley Dale stone facing, with Portland cement concrete backing. The new road (across the Midsummer Common) will be 40 ft. wide, with two footways of 7 ft. wide on either side, and properly drained. Cast-iron rail-fencing will be laid on each side of the road. The roadway of the bridges and approaches will be of granite macadam, and the footings of granolithic pavement. The engineers for the work are Mr. John J. Webster, M.Inst.C.E., of Lord-street, Liverpool, and Mr. Frank Waters, of Sidney-street, Cambridge. The sole contractor is Mr. John Mackay, of Bury St. Edmunds. The clerk of the works is Mr. G. McNeil. The cost of the whole of the works, which are to be completed next June, will be about 10,000*l.*

Paris a Seaport.—It may be remembered that last session a proposal for making Paris a port was introduced in the French Chamber by M. Achard, and referred to a committee for examination, and this body has now issued its report, which is unanimously in favour of the scheme. The committee has consulted engineers, naval officers, members of the Academy, &c., and by all the proposal is approved. An objection has, however, been raised against the cost of the undertaking, said to be about 2,000 million francs, but the committee is of opinion that even this heavy outlay will be repaid. The canal is proposed to be twice as wide as the Suez Canal, the distance from the sea—at Rouen—to Paris being estimated at 180 kilomètres. The depth is to be 6·20 mètres. The most important work would be the making of a great harbour between St. Denis and Clichy. There are also second-class harbours proposed for Andelys, Mantes, Prissy, and Argenteuil. The committee points out the immense importance of such a canal to French trade, particularly in competition with that of Antwerp, which is every year becoming keener. The proposal will be laid before the next Chamber. The plans adopted for the canal are those of M. Bouquet de la Grye, of the French Institute, and Vice-Admiral Thomassin.

Removal.—Messrs. Mainzer & Kempthorne have removed to 18, Berners-street, Oxford-street, W.

Examination and Registration of Plumbers.—At the examinations of plumbers for registration held on Saturday at the Gulds' Institute, applicants were present from various parts of London, as well as from Somerset, Devon, Essex, and Kent. The examinations embraced tests of joint-making, lead-laying, &c., and a set of questions relating to the qualities of materials, the construction of various forms of house-fittings, and the principles of sanitation. The examiners were Messrs. Charles Hudson, W. Titmas, John Smeaton, J. W. Clarke, C. T. Millis, and R. A. Nurse—the last representing the United Operative Plumbers' Association of Great Britain and Ireland. Two-thirds of the applicants succeeded in passing the examinations. In connexion with this matter we may note that the first annual meeting of the registered plumbers of the counties of Aberdeen, Kincardine, and Banff, was held in Gordon's College, Aberdeen, on Saturday afternoon. There was a very good attendance, and Professor Matthew Hay, President of the Council, occupied the chair. There were also on the platform Lord Provost Henderson, Mr. Peter Esslemont, M.P., Dr. Ogilvie, Mr. John Miller, of Sandilands, Mr. William Pyper, of Hillhead, Mr. Boulton, Burgh Surveyor, and Mr. Kenneth Cameron, Sanitary Inspector. Professor Matthew Hay said that the report which had been placed in their hands showed that very substantial progress had been made—in fact, had exceeded their most sanguine expectations. The registration roll included the names of all the best known and most capable plumbers within the city and the three counties.

The English Iron Trade.—During the past week the English iron market has been somewhat less excited, but the rising tendency, both in pig and manufactured iron, has continued. If we except the Glasgow warrant market, where a very large business has been done daily, trade in pig-iron has rather slackened, owing partly to the fact that makers cannot, with the capacity of production at their command, accept the orders which are offering. Scotch warrants, notwithstanding many fluctuations, are maintained at about former rates, while with makers in Scotland prices are still going up. Middlesbrough iron, after a temporary drop of 2s. a ton, is 9d. dearer on the week. Bessemer pig is unchanged, notwithstanding a heavy demand. Both Lancashire and Staffordshire makers ask higher terms. A salient factor in the present conjuncture of the iron trade is the steady decrease of the stocks of pig-iron. There is a fairly good demand for finished iron, and prices are going up, although not to the same degree as crude metal. The inquiry for steel is as heavy as ever, and many works are unable to book fresh orders. Rails are 10s. higher, and proportionate rises are announced for other steel products. Shipbuilders are booking fresh work, and have a busy winter before them. Engineers are all very briskly engaged.—*Iron.*

The Association of Public Sanitary Inspectors of Great Britain.—The opening meeting of this Association for the present season was held at Westminster Town Hall, on Saturday last, when Mr. Hugh Alexander, the Chairman of the Council, delivered an address on "The Sanitary Institute: Its Examinations and Certificate." We regret that we have no space to devote to it this week.

Complimentary Dinner to a Builder-Mayor.—Last week, the Mayor of Bradford (Ald. Wm. Moulson) was entertained to a complimentary dinner by the Bradford Master Builders' Association, of which body his Worship is treasurer.

PRICES CURRENT OF MATERIALS.

TIMBER.	£.	s.	d.	£.	s.	d.
Greenheart, B.G. ....ton	7	0	0	7	15	0
Teak, E.I. ....load	12	0	0	14	0	0
Sequois, U.S. ....foot cube	0	3	3	0	3	6
Ash, Canada ....load	3	10	0	5	0	0
Birch ,, ...load	3	10	0	5	0	0
Elm ,, ...load	4	0	0	5	0	0
Fir, Dantzic, &c. ....load	2	0	0	3	10	0
Oak ,, ...load	2	10	0	4	10	0
Canada ....load	5	10	0	7	10	0
Pine, Canada red ....load	3	0	0	4	0	0
,, yellow ....load	3	10	0	5	5	0
Lath, Dantzic ....fathom	4	10	0	6	10	0
St. Petersburg ....fathom	5	0	0	6	10	0
Wainscot, Riga, &c. ....log	2	15	0	4	5	0
Deals, Finland, 2nd and 1st ....std. 100	9	0	0	11	0	0
,, ,, 4th and 3rd ....std. 100	7	0	0	8	15	0
Riga ....std. 100	7	0	0	9	0	0
St. Petersburg, 1st yellow ....std. 100	11	0	0	15	0	0
,, 2nd ,, ...std. 100	10	0	0	11	0	0

TIMBER (*continued*).	£.	s.	d.	£.	s.	d.
Deals, St. Petersburg, white.....	7	0	0	10	0	0
Swedish	8	0	0	16	0	0
White Sea	9	0	0	17	0	0
Canada, Pine, 1st	16	0	0	26	0	0
" " 2nd	11	0	0	17	10	0
" " 3rd, &c.	8	0	0	10	10	0
" Spruce, 1st	9	0	0	11	0	0
" " 3rd and 2nd	7	0	0	9	0	0
New Brunswick, &c.	6	10	0	8	10	0
Battens, all kinds	6	0	0	18	0	0
Flooring Boards, sq., 1 in., prepared, First	0	11	0	0	14	0
Second	0	8	0	0	10	6
Other qualities	0	5	6	0	7	9
Cedar, Cuba.....foot	0	0	4½	0	0	5
Honduras, &c.	0	0	4½	0	0	4½
Mahogany, Cuba	0	0	4½	0	0	6½
St. Domingo, cargo average	0	0	4½	0	0	6½
Mexican "	0	0	4½	0	0	5½
Tobasco "	0	0	5½	0	0	6½
Honduras "	0	0	5½	0	0	6½
Box, Turkey .....ton	4	0	0	13	0	0
Rose, Rio.....	15	0	0	30	0	0
Bahia	14	0	0	18	0	0
Satin, St. Domingo .....foot	0	0	6	0	1	0
Porto Rico	0	0	9	0	1	3
Walnut, Italian	0	0	4½	0	0	6½

METALS.	£.	s.	d.	£.	s.	d.
IRON—Bar, Welsh, in London	6	15	0	7	0	0
" " at works in Wales ...	6	0	0	6	10	0
" Staffordshire, in London ...	7	10	0	8	0	0
COPPER—						
British, cake and ingot..... ton	48	0	0	49	0	0
Best selected	49	0	0	50	0	0
Sheets, strong	57	0	0	58	0	0
Chili, bars	44	0	0	0	0	0
YELLOW METAL.....lb.	0	0	8½	0	0	8½
LEAD—Pig, Spanish .....ton	13	0	0	13	5	0
TIN—Straits .....ton	96	0	0	0	0	0
Australian	96	0	0	0	0	0
English Ingots.....	101	0	0	0	0	0
OILS.						
Linseed .....ton	21	0	0	21	5	0
Cocoanut, Cochin	26	10	0	27	0	0
Ceylon	23	10	0	23	15	0
Palm, Lagos	26	10	0	0	0	0
Rapeseed, English pale	31	5	0	0	0	0
" brown	29	15	0	30	0	0
Cottonseed, refined	23	10	0	0	0	0
Tallow and Oleine	21	0	0	40	0	0
Lubricating, U.S.	5	10	0	6	15	0
" refined	7	0	0	13	0	0
TAR—Stockholm .....barrel	1	6	0	0	0	0
Archangel	0	15	6	0	15	9

CONTRACTS AND PUBLIC APPOINTMENTS.

Epitome of Advertisements in this Number.

CONTRACTS.

Nature of Work or Materials.	By whom Required.	Architect, Surveyor, or Engineer.	Tenders to be delivered.	Page.
Lamp Columns	Hendon Local Board ...	S. S. Grimley.....	Nov. 11th	i.
Road-making Works	Lewisham Bd. of Wks.	*Official*	Nov. 12th	ii.
Works at Derby	M. R. Co.	do.	Nov. 14th	ii.
Quay Wall, &c.	Wisbech Corporation...	W. H. Thomas'.....	Nov. 18th	x.
Roadmaking and Paving Works.....	Hammersmith Vestry...	H. Mair	Nov. 20th	x.
Works and Materials	L. C. C.	*Official*	do.	x.
Main Drainage Extension.....	West Ham Council	Lewis Angell.....	Nov. 26th	x.
Alteration and Extension of Schools	Burton-on Trent Sch Bd.	R. Churchill	Nov. 30th	x.
Mission Hall, Whitechapel	.....	A. B. Pite	Not stated.	x.
Addition to Schools	St. Alban's Sch. Bd. ...	Clarksons	do.	x.

PUBLIC APPOINTMENTS.

Nature of Appointment.	By whom Advertised.	Premium.	Applications to be in.	Page.
Clerk of Works.....	Swindon Local Board...	Not stated	Nov. 11th	xvi.
Surveyor	Lancaster Corporation	300*l.*	Nov. 21st	xvi.

TENDERS.

[Communications for insertion under this heading must reach us *not later than* 12 *noon on Thursdays.*]

BELLAGGIO (East Grinstead).—For erecting bungalow, for Mr. W. Spyer. Mr. Walter Graves, architect, Winchester House, E.C. :—

Mansbridge, Bellaggio (accepted).....	£450 0 0

BIRMINGHAM.—For erecting copper-house, hop back-house, brewer's room, laboratory, and other works, at Aston Brewery, Birmingham, for Messrs. Joseph Ansell & Sons. Messrs. Inskipp & Mackenzie, architects, 5, Bedford-row, W.C. Quantities by Messrs. R. L. Curtis & Sons :—

Jones & Mason, Birmingham	£3,980 0 0
Robinson	3,377 0 0
Simons	3,360 0 0
Moorhouse	3,255 0 0
Barnsley	3,170 0 0
Lee & Son	3,125 0 0
Surman & Sons.....	3,095 0 0
Jeffery & Son.....	2,950 0 0
Bowen	2,889 0 0
Webb Bros. (accepted)	2,877 0 0

BRIGHTON.—For erecting chapel and chaplain's house, Brighton. Messrs. Scott & Cawthorn, architects :—

Newnham	£2,170 0 0
Chappell	2,097 0 0
Freeman	2,060 0 0
Patching	1,994 0 0
C. & F. Cheesman (accepted)	1,980 0 0

CHISWICK.—For alterations and repairs to schools at Hogarth-place, for the Chiswick School-board. Mr. George Saunders, architect. Quantities by Mr. F. W. Miller, 73, Queen Victoria-street, E.C. :—

Arundel & Son	£3,027 0 0
C. Rogers	3,020 0 0
W. Hunt.....	2,999 0 0
H. Whitman	2,998 0 0
W. Adamson & Son.....	2,942 0 0
W. Blackburn	2,919 0 0
J. J. Bryant (accepted)	2,904 0 0

CROWTHORNE.—For building a house for Mr. G. T. Powell. Mr. W. Ravenscroft, architect :—

Bottrill & Son (accepted).....	£975 0 0

[No competition.]

FAREHAM (Hants).—For works in connexion with the Knowle Asylum Waterworks, for the Hampshire County Council. Mr. Edward T. Hildred, Engineer, Southall.

Contract No. 1.—*Supplying and Laying* 1,260 *yards line—6 in. Cast Iron Water Main and Castings, Supplying and fixing Sluice and Air Valves, Hydrants, &c.*

G. Lambert Gibson, Southall	£526 0 0
H. J. Saunders, Southampton.....	500 0 0
A. J. Slade, Maidstone	499 0 0
A. T. Catley, Lloyd-square	496 0 0
W. A. Smith & Co., 4, Hanover-place, N.W.	465 9 6
A. J. Gould, Fareham (accepted)	440 0 0

[Engineer's estimate, £506. 7s. 6d.]

Contract No. 2.—*Excavating, Sinking, and Lining with Brickwork in Cement a Well 6 ft. diameter.*

P. C. Badham & Co., Holborn	£491 0 0!
H. J. Saunders, Southampton..... ..	400 0 0
Le Grand & Sutcliff, 100, Bunhill-row, E.C. (accepted)	300 0 0
R. P. Batchelor, Chatham	284 11 9!

[Engineer's estimate, £402. 18s. 6d.]

Contract No. 3.—*For Two Single-Cylinder, Direct-Acting, Vertical Pumping Engines, Two Steel Boilers, &c.*

James Simpson & Co., Lim., Pimlico	£1,879 10 0
Bunyan & Porter, Portsmouth	1,660 10 0
Bryan, Donkin, & Co., Limited, Southwark	1,523 10 0
G. Napier & Sons, Southampton ...	1,464 10 0
G. H. H. Emett, Dewsbury	1,300 0 0
John Warner & Sons, Cripplegate...	1,275 10 0
S. Owens & Co., Whitefriars	1,232 10 0
G. Waller & Co., Park-street, Southwark, S.E. (accepted).....	1,151 10 0

[Engineer's estimate, £1,200.]

HANLEY.—For the conversion of the old Mechanics' Institute into the North Staffordshire Technical Museum. Messrs. W. Sugden & Son, architects, Leek. Quantities by the architects :—

Nicholas Bennett, Burslem (general repairs, &c.) (accepted)	£373 12 5
G. & W. J. Carter, Congleton (roof repairs, &c.) (accepted)	119 0 0

[No fixtures or fittings included in the above.]

HIGH BARNET.—For extension of factory premises, for Messrs. Henry Gilling & Sons, Union-street, High Barnet. Mr. Hubert A. Gregg, architect :—

J. W. Wheeler.....	£1,475 0 0
W. James	1,370 0 0
G. W. N. Miller	1,360 0 0
Chessum & Sons	1,300 0 0
Worboys & Son (accepted)	1,247 0 0

IDEFORD (Devon).—For works connected with the water-supply. Mr. S. Segar, surveyor, Newton Abbot :—

Andrew S. Distin, Totnes.....	£199 9 0
Parker Bros., Newton Abbot	186 9 0
C. Johns, Dawlish	183 10 0
Robt. Hall, Ideford (accepted)	173 14 0

[Surveyor's estimate, to include compensation, 200*l.*]

LONDON.—For erecting three houses in Lewisham-road, New Cross. Mr. Horace T. Bonner, architect, 29 and 30, King-street, Cheapside, E.C. Quantities supplied by Mr. H. Dow-White, 15, New Broad-street, E.C. :—

H. L. Holloway, Deptford*.....	£1,758 0 0

* Accepted.

LONDON.—For new shop fronts and repairs to Nos. 86, 88, 90, 92, 94, and 96, Cromer-street, Gray's-inn-road. Messrs. Brett A. Elphicke & A. Howell, architects, 50, Queen Anne's-gate, S.W. :—

The Westminster Contract Company...	£513 0 0
W. Rowlandson	495 0 0
F. Brown (accepted)	360 0 0

LONDON.—For new billiard room, approaches, alterations, and new staircase to concert-rooms, extension of saloon bar and general decorations, at "Tufnell Park Hotel," for Mr. John Lees. Messrs. Carter & Son, architects and surveyors, 541, Holloway-road, N.

Macintosh, Langham-street	£1,534 0 0
Joselyne, Young, & Co., High-street, Borough	1,440 0 0
Blandford, Avenell-road	1,295 0 0
Caule, Upper Hornsey-rise	1,199 0 0
Boreham, Liverpool-road	1,188 6 6
Farquharson, Grafton-road	1,100 1 0
Lake Norris, Upper Holloway.....	1,100 0 0
William Evans, Upper Holloway ...	1,078 10 0
Hughes, Stroud-green.....	1,062 0 0
Crows, Queen Victoria-street	980 0 0

LONDON.—For new latrines and alterations in connexion therewith at the Adelaide-street Schools, St. Martin's-in-the-Fields, for the Building Committee. Mr. William S. Cross, architect, 18, Outer Temple, Strand. Quantities by Mr. H. E. Pollard :—

Hall, Beddoll, & Co.	£740 0 0
M. Patrick & Son.....	643 0 0
J. & H. Barrys.....	627 0 0
J. D. Hobson (too late).....	613 0 0
Macey & Sons	596 0 0
J. Clemence	593 0 0
C. Wall	585 0 0
Dorrell & Co.....	565 0 0

LONDON.—For providing a new coal-cellar at the Byron and Bright-street School, Bromley; improving the lighting of the Infants' Department, and for providing a new exit for the Boys' Department, for the School Board for London. Mr. T. J. Bailey, architect :—

T. Linfield.....	£376 0 0!
W. V. Goad	305 0 0
J. Derry.....	242 0 0
Atherton & Latta	210 0 0
H. Bridel*	170 0 0!

* Recommended by the Works Committee for acceptance.

LONDON.—For various works in connexion with the Farncombe-street School, Bermondsey, for the School Board for London. Mr. T. J. Bailey, architect :—

J. B. Gerrans	£535 0 0!
A. Martin	500 0 0
W. V. Goad	439 0 0
T. Linfield.....	434 0 0
J. W. Roy.....	325 15 0
J. Derry.....	314 0 0
H. Bridel*	278 0 0!

* Recommended by the Works Committee for acceptance.

LONDON.—For erecting a temporary iron building for the accommodation of infants on the Ivydale-road site, Nunhead, for the School Board for London. Mr. T. J. Bailey, architect :—

W. Jones	£503 0 0
W. Harbrow	498 10 0
J. J. Richards	460 0 0
London Iron Building Co.	459 0 0
J. W. Smales	445 0 0
A. W. Pocock*	417 0 0

* Accepted by the Works Committee.

LONDON.—For removing the existing, and erecting new w.c.'s for the Girls' and Infants' Departments of the Dalmain-road School, Forest Hill, and also for providing a new coal-cellar, for the School Board for London. Mr. T. J. Bailey, architect :—

J. H. Lyon	£740 0 0
H. Bridel	656 0 0
W. V. Goad	539 0 0
T. W. Haylock.....	520 0 0
J. Derry.....	440 0 0
T. Linfield*	419 0 0

* Recommended by the Works Committee for acceptance.

LONDON.—For providing a covered playground for the Girls' Department of the Albion-street School, Rotherhithe, for the School Board for London. Mr. T. J. Bailey, architect :—

W. V. Goad	£340 0 0
J. B. Gerrans	270 0 0
T. Linfield	247 0 0
A. Martin	238 0 0
J. Derry.....	196 0 0
H. Bridel*	193 0 0

* Recommended by the Works Committee for acceptance.

LONDON.—For building three houses in the Meyrick-road, and alterations to a shop in the Falcon-road, Battersea, S.W., for Mr. G. S. Tucker. Messrs. Williams & Son, architects :—

Thomerson & Son.....	£1,500 0 0
Gregory	1,473 0 0
Todd	1,440 0 0
R. Barker	1,165 0 0

LONDON.—For taking down and rebuilding No. 282, Strand, W.C., for Mr. W. Schofield. Mr. W. H. Duffield, architect, 2, King-street, Cheapside. Quantities supplied by Mr. J. Rockwood :—

Newton & Co.	£1,550 0 0

LONDON.—For finishing No. 44 and 45, Shaftesbury-avenue, W.C., for the International Hotel Employés Society. Mr. William Brett, 10, Charing-cross-road, architect :—

Langler & Pinkham, Kensal-green*	£1,539 0 0

* Accepted.

LONDON.—For alterations to bar fittings, and the provision of new lobby and partitions, &c., all in Spanish mahogany, at the "Olive Branch," Crawford-street, W., for Mr. Rosenberg. Mr. Alexander, architect :—

Mark	£300 0 0
Schlater	284 0 0
Holt & Garlick.....	197 0 0

LONDON.—For alterations to Cornwall House, S.E. Mr. E. J. Stevens, architect :—

Ham & Son	£306 11 6
Mackie	299 0 0
Garrett & Son	250 0 0
Whitehead & Co. (accepted)	240 0 0
Balaam Bros.	239 0 0

LONDON.—For new bar-fittings to the "Fleece," Marsham-street, Westminster, for Mr. F. Trodd. Messrs. Saville & Martin, architects, 86 and 87, Strand, W.C.:—

General Fittings.

Spencer & Co.	£120	0	0
Turtle & Appleton	118	0	0
J. Freshwater	95	0	0
Drew & Cadman	93	0	0
J. Vears & Co. (accepted)	83	0	0

Painters' Work.

W. Helling	148	0	0
Drew & Cadman	141	0	0
T. Heath	117	10	0
J. Davidson	114	0	0
F. J. Rose	113	0	0
Watts & Co. (accepted)	104	0	0

Gasfitters' Work.

W. Winn (accepted)	29	15	0

LONDON.—For rebuilding No. 85, Ossulston-street, N.W., for Miss L. A. Silcock. Messrs. Saville & Martin, architects, 86 and 87, Strand, W.C.:—

Gould & Brand	£837	0	0
Pusey & Lumley	825	0	0
E. Toms	778	0	0
S. Goodall	769	0	0
J. Auley	751	0	0
S. R. Lamble (accepted)	739	0	0

LONDON.—For new story and sundry alterations to the "Southampton Arms," High-street, Camden Town, N.W., for Mr. E. W. Cathie. Mr. W. W. Gwyther, architect, 102, Temple Chambers, Temple-avenue, E.C. Quantities supplied by Messrs. Saville & Martin, 86 and 87, Strand, W.C.:—

J. T. Chappell	£1,698	0	0
Gould & Brand	1,657	0	0
W. Oldrey	1,615	0	0
E. Toms (accepted)	1,569	0	0

NORWOOD (Surrey).—For the erection of a detached residence at Falkland Park, South Norwood Hill, Surrey, for Mr. Thomas McMeekin. Mr. H. A. Rawlins, architect, 46, Queen Victoria-street, London, E.C.:—

Clarke & Bracey	£14,389	0	0
Brown, Son, & Blomfield	14,126	0	0
Bywaters	13,675	0	0
Rider & Son	13,586	0	0
Dove Brothers	13,500	0	0
James Morter	13,472	0	0
Patman & Fotheringham (accepted)	12,929	0	0

READING.—For rebuilding "Lower Ship Hotel," for Messrs. Nicholson & Sons. Mr. F. W. Albury, architect:—

Bottrill & Son (accepted)	£3,300	0	0

READING.—For rebuilding houses and shops at the corner of King-street and Duke-street, for Mr. Dowling (chemist), Messrs. Botley & Lewis (silversmiths), and Mrs. Adnams (poulterer, &c.). Mr. F. W. Albury, architect, Reading:—

Winter & Fitt	£4,764	0	0
G. Wernham	4,343	16	0
Collier & Catley	4,243	0	0
Higgs & Sons	4,229	0	0
W. H. Simonds	4,156	0	0
Bottrill & Son (accepted)	4,150	0	0

RUTHIN.—For the erection of farm buildings at Penygraig and Tanygraig, on the Ruthin Castle Estates, North Wales. Mr. W. Charles Evans, architect, Post's-corner, Westminster:—

John Morris, Ruthin	£341	19	11

SPENCER'S WOOD (Berks).—For erecting new schools, for Mr. T. W. Allfrey. Messrs. Chas. Smith & Sons, architects:—

Higgs & Sons	£1,550	0	0
Collier & Catley	1,520	0	0
Bottrill & Son (accepted)	1,460	0	0

WOKING.—For the erection of stabling, Guildford-road, Woking, for Mr. T. Russell. Mr. Robert Clamp, architect, the Studio, Woking:—

Marriott & Co., High Barnet	£670	0	0
H. G. Nesmith, Chertsey	650	0	0
Stanley Ellis, Guildford	625	0	0
Oades, Bros., Egham	599	0	0
Andrew Glew, Worplesdon	590	0	0
Harris & Son, Woking	575	0	0
A. A. Gale, Woking	565	0	0
C. Fifield, Woking	560	12	0
J. Whitburn, Woking (accepted)	530	0	0
E. Seaber, Godalming (too late)	510	0	0

WEST HAM.—For works required for the West Ham main drainage extension. Mr. Lewis Angell, M.Inst.C.E., Borough Engineer:—

No. 4 Contract.

Mowlem & Co.	£12,724	0	0
J. G. B. Marshall	11,671	0	0
Cooke & Co.	11,068	0	0
J. Adams	10,365	3	3
J. Jackson	10,150	0	0
J. W. & J. Neave	9,945	0	0
G. Bell	9,633	0	0
L. Bottoms	9,490	0	0
Perry & Co. (accepted)	9,150	0	0

No. 5 Contract.

Mowlem & Co.	£15,413	0	0
L. Bottoms	13,805	0	0
J. G. B. Marshall	13,526	0	0
G. Bell	13,270	0	0
J. Jackson	12,990	0	0
J. W. & J. Neave	12,880	0	0
J. Adams	12,466	5	0
Perry & Co.	12,389	0	0
Cooke & Co. (accepted)	12,097	0	0

WOKINGHAM.—For erecting house and stables, for Mr. S. S. Melville. Mr. Joseph Morris, architect:—

Bottrill & Son (accepted)	£2,490	0	0

[No competition.]

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TO CORRESPONDENTS.

T. E. T.—Student (the answer given seems a sufficient one, and we cannot continue the correspondence).—M. V.—"Percentage." J. R., W. P. B. (next week).—W. J. P.—W. & Co. (too limited in amount for insertion).—W. E. (too late).—G. & Co. (shall have attention).—D. & B. (ditto).—L. R. F. (no space).—T. B. (ditto).

All statements of facts, lists of tenders, &c. must be accompanied by the name and address of the sender, not necessarily for publication.

We are compelled to decline pointing out books and giving addresses.

NOTE.—The responsibility of signed articles, and papers read at public meetings, rests, of course, with the authors.

We cannot undertake to return rejected communications.

Letters or communications (beyond mere news-items) which have been duplicated for other journals, are NOT DESIRED.

All communications regarding literary and artistic matters should be addressed to THE EDITOR; all communications relating to advertisements and other exclusively business matters should be addressed to THE PUBLISHER, and not to the Editor.

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